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PUNJAB DISTRICT GAZETTEERS

AMRITSAR DISTRICT

BY

A. MACFARQUHAR



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— B.D. 7. 11. 55

CHANDIGARH

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PREFACE

1. This edition of the Gazetteer of the Amritsar District has been in great part re-written from collations of fresh material. Extensive use was made of non official sources of information and of technical departments, so that a considerable measure of authority should attach to the new material. I wish to acknowledge with gratitude the generous assistance received from almost all sources to which I applied.

2. In this edition paragraphs have been numbered for facility of reference.

3. The Fifth Amritsar Settlement was completed during the 1939-45 War and it was decided (FC's letter No. 15748 dated 17th November 1942) that the Gazetteer should not be revised and published until after the War. The manuscript of this volume was therefore withheld from the press. Hence the delay in its appearance. Changes which have taken place while the manuscript was lying unprinted have *not* been incorporated as I considered that the Gazetteer should represent the situation existing at the time of Settlement operations.

July 1947.

(A. MACFARQUHAR).

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CHAPTER I Descriptive

SECTION A—PHYSICAL ASPECTS.

1. Amritsar means “the tank of nectar or immortality” and the district derives its name from the sacred tank in its capital city on which the Golden Temple of the Sikhs is built.

Derivation of name. This was originally a small natural pool of water, and is said to have been a favourite resort of Baba Nanak, the first *Guru* or apostle of the Sikhs. The site was permanently occupied by the fourth *Guru*, Ram Das, who in 1577 obtained land in the neighbourhood. The pool soon acquired a reputation for sanctity, and the following of the *Guru* migrating to the sacred spot, a small town grew up known at first as Ramdaspur or Guru-ka-chak, and later, as the pool improved and formed into a tank, as Amritsar.

2. The district of Amritsar is in the Lahore division of the Punjab and lies between north latitudes $31^{\circ}10'$ and $32^{\circ}3'$ and east longitudes $74^{\circ}30'$ and $75^{\circ}24'$ with an area of 1560 square miles. It is an oblong in shape with its longest lines running north-west to south-east. It forms part of the tract known as the Bari Doab, the country lying between the rivers Ravi and Beas. It is bounded on the north-east by Gurdaspur district, on the south-east by Kapurthala State, on the south-west by Lahore district and on the north-west by Sheikhupura and Sialkot districts. The river Beas which separates it from Kapurthala joins the Sutlej near the point where the three districts of Lahore, Ferozepore and Amritsar and the Kapurthala State meet. The Ravi river runs between the Amritsar district and Sialkot and Sheikhupura districts.

It is divided into three tahsils or fiscal sub-divisions, named Amritsar (503 square miles), Tarn Taran (595) and Ajnala (418), the last-named occupying all that portion which fronts the river Ravi and the two former abutting on river Beas. The tahsil areas given in this sub paragraph exclude 44 square miles in Urban and Suburban circles.

No portion of any Indian State is included within the limits of the district.

3. To the eye the district presents the appearance of a continuous level plain, unbroken by hill or valley, dotted with clusters of mud-roofed houses, and sparsely wooded, except near villages and irrigation wells, and along the main roads and canals. The prevailing soil is a light reddish-yellow loam, known to the people as *marra*, but this stiffens into *rohi*, or clay, where the surface drainage collects on its way down the *doab* from the hills, and occasionally degenerates into strips of sandy, slightly uneven soil, locally known as *tibba*, bare of trees and apt to be blown into hummocks by the wind. There are no hills within its limits, and nothing of the nature of rock or stone is to be met. The formation is distinctly alluvial. Though apparently of a uniform level, the country falls away to the west from the high right bank of the Beas to the left bank of the Ravi and there is also a gentle slope, of perhaps two feet in the mile, down the *doab*, which slightly broadens out as the two rivers diverge after issuing from the hills above Gurdaspur. The district is devoid of impressive natural features, unless we except the *dhaya*, as the cliffs forming the high bank of the Beas are called, the sandy ridge running down the *doab*, the scarcely perceptible drainage lines which carry off the surface water, and the perennial stream known in Ajnala as the Sakki, to be presently mentioned.

4 The Beas river rises north of the Kulu valley, and passing through the Kangra district, and between Gurdaspur and Hoshiarpur, enters the sandy valley which divides the Amritsar district from the Kapurthala State.

Rivers : (a)
The Beas.

Here its bank on the right or Amritsar side is an abrupt cliff, varying in height from twenty to a hundred feet, the upper stratum of which is hard clay mixed with kankar, and the lower usually, though not always, fine river sand. At the foot of this cliff, between it and the cold weather bed of the river, lies a strip of alluvial land, which at some points is as much as two miles broad. At other points the cold

weather stream flows close under the cliffs and in the southern part of the district its recent set towards Amritsar has caused loss of cultivation and of residential sites. At some places there are embayments caused by the river cutting into the high cliff where alluvial deposit of soil has taken place. The left bank, on the other hand, is uniformly low and on the Kapurthala side there is a stretch of moist alluvial land running back for several miles into the interior, which is fertile, well-wooded and liable to inundation. There is a tradition that about a century ago, the river ran under the village of Mira in Kapurthala territory, seven miles distant from its present course, and the depression is still clearly traceable and is now part of the West Bein. In this district what cultivation there is in the valley is carried on between the foot of the cliff and the normal cold weather stream, or in the embayments caused by the erosion of the cliff. Back from the river the influence of the cliffs persists for considerable distances in some places for gullies make cultivation impossible and even spoil the fertility of the hinterland by accelerating the run-off of rain water before it has time to benefit the soil. The river itself carries an immense body of water in the rainy season, and in flood may be nearly a mile in width and from thirty to thirty-five feet in depth. But the floods, swollen by the melting snows on the hills, quickly subside and have passed their crest by the beginning of August, after which the higher portions of the inundated land are sown with coarse rice, cereals, pulses, and cane. In the cold weather, the river rarely sinks so low as to be fordable but is seldom over a hundred yards wide. The North-Western Railway crosses it by a bridge close to the station known as Beas. Here for road traffic a bridge of boats used to be maintained, but this has been discontinued as a bridge now carries the Grand Trunk Road across the river.

The Ravi is a river of a different character. The high bank of the Beas affords a measure of security to cultivation in some part of almost every riverain estate uniformly low.

(b) The Ravi. The rudiments of a *ahaya* or high bank appear on the left bank of the Sakki in its last ten miles but this is a long way from the present river and does nothing

to mitigate the defencelessness of villages between the two streams. On the Sheikhpura side of the Ravi there is a river-training work protecting the Shahdara Distributary from severance by river creeks and the left bank of this distributary which is subject to river spill has been constructed as a flood embankment. Villages on the Amritsar side of the river have no such protection and the sixty estates officially recognised as liable to river action do not exhaust the limit of liability to trouble if there is a really high flood in the river. In August 1936 there was a flood which local opinion though the worst in twenty-five years. More than a hundred villages suffered and gratuitous relief as well as loans for seed had to be given. The surprising feature of this flood was the damage done to villages on the banks of the Sakki which would normally be immune. Even in Ajnala itself which is ordinarily secure some houses had to be evacuated. Fortunately such heavy floods are rare but the broad shallow valley of the Ravi offers no barrier to rising water and it is not surprising that the residential sites are generally humble and impermanent, the cattle weak and the people improvident, and that barter is the ordinary system of business. But within limits recovery is quick and unless the river is unusually harsh the spring crop following a flood should be very good. There are many creeks and backwaters but it is not always the same channels which carry water. Year after year a creek may regularly flow in the summer and then for many years remain dry owing to a change in the rivers' course. The Ravi carries rather more fertilising silt than the Beas (which from the comparative clearness of its water is sometimes called *nili* or blue) and where this silt is thrown up, heavy crops of wheat can be raised. But cultivation in the river bed is always precarious. In the cold weather, the Ravi dwindles to a small stream owing to the Upper Bari Doab Canal drawing off most of the water at Madhopur, and the river is fordable opposite almost every village. Indeed much of the cold weather stream comes from springs in the bed of the river, and very little of what leaves the hills finds its way down to the lower reaches. A bridge of the boats used to be maintained

AMRITSAR DISTRICT.]

[SECTION A.

at Kakar, three miles from the Lahore Border, to serve the traffic on the road between Amritsar and Gujranwala, but it was given up many years ago. There are no bridges across the river in this district.

The only other perennial stream found in the district is the Sakki Nala. The Sakki begins as the Kiran Nala in the Gurdaspur district where some irrigation is done by

(c) The Sakki a District Board inundation canal taken out of it.

This canal tails into Ajnala tahsil in Ramdas where it irrigates some two hundred and fifty acres. In this district the Nala has the appearance of a narrow river whose left bank generally higher than this right bank. Winter discharges are low but the considerable summer stream is augmented by unwanted canal water sent down the Aliwal Escape from the Main Branch Upper of the Upper Bari Doab Canal. On at least one recent occasion the volume of this water is alleged to have caused damage to crops. But the loss of the Sakki water would be even more serious and some concern has been expressed over rumours that a new head for the Kiran canal will be cut below the Escape and so transfer to the canal much of the water which now feeds hundreds of acres of *sailab* and *abi* land in the Ajnala tahsil. There is no present truth in these rumours but if ever a considerable volume of Sakki water is diverted in this way or by drainage of the Gurdaspur *chhambs* it would be necessary to reconsider the assessment of the Hithar circle and of estates in the Uther circle on the banks of the Nala. The proprietary title in the land under the Nala rests with the riparian owners but they have no claim beyond user in the water for as early as 1906 the Sakki stream was notified under section 4 of the Punjab Minor Canals Act and it had already been notified as a drainage under section 55 of Northern India Canal and Drainage Act in 1875. The stream ends its independent existence where it joins the Ravi at Kakkar. The sinuous course of the Sakki Nala has not only done much to isolate the Sailab and Hithar circles from the rest of the tahsil and from access to markets but has also stood in the way of extension of regular canal irrigation to this tract.

Its own potentialities as an irrigation channel have not been overlooked and ever since 1890 when Mr. Nicholl Secretary of the District Board put forward his project for irrigation by canals fed from this channel the scheme in one form or another has attracted the interest of many district officers. Any hope of finding provincial funds for it was killed in 1934 when the Irrigation Branch advised that in view of the extremely small discharges carried by the Nala in the cold weather a canal from it was not likely to be a success and that it was questionable whether the blocking of this natural drainage by weirs to secure irrigation would be in the public interest. The district board was given a free hand to proceed at its own risk but was not encouraged to do so in view of this advice. Pumps worked by hydro-electric power may eventually supplement the open wells (*jhallars*) which farmers have already constructed on the banks of the stream. It is sluggish and erosion of the banks is almost unknown. Damage is done by floods, however, to the spring crops sown on the shelving land sloping down to the edge of the banks, and by spills into depressions leading from the Sakki towards the Ravi. As its floods deposit no silt, it is not always a welcome neighbour; and besides the damage occasionally caused by it, it is a great interruption to communications. It is bridged where the arterial road to Sialkot crosses it just north of Ajnala village, and on an unmetalled road at Nepal, and further bridges are building or contemplated at Abu Said, Karalian and Mohleke.

5. In Amritsar tahsil east of Kasur Branch drainage causes no concern. The Patti Rohi of often evades the eye in its sandy course southwards and does no appreciable damage. A parallel depression nearer the river has in the past been known by the same name but is now degraded in official maps to the minor dignity of a number. The Riarki Vang is strictly speaking a creek of the river and not a drainage at all. Only the last five miles of its course to the river are distinct and throughout this length the creek runs in a broad deep bed the banks of which have much the same appearance as the *dhaya*. Erosion on the sides of this creek has

(a) Natural drainage and artificial drains: Amritsar tahsil.

caused greater loss of cultivated land in the tahsil than the river. A short artificial drain runs from the Riarki Vang to the river in Buddha Theh but has never been used to divert water. Drainage does not become an important problem until the Kasur Nala is reached well west of the Kasur Branch. Known in this tahsil as the Hansli, the *nala* follows a well-defined course from the point where it enters the tahsil from Batala until it passes out into Tarn Taran. On its margins the soil is stiff and often *kalrathi* and its presence is a handicap to villages whose lands are divided by its passage. Surplus water from the area between the *nala* and the Main Branch is led into the Hansli north of the Grand Trunk road by the Makhanwindi and Valla drains. South of the road drainage is defective in the basin of the Sultanwind Drain, otherwise known as the Mandiala Rohi, where there is much inferior land. West of the Main Branch of the canal drainage has always been a matter of the most serious concern. In the northern part of this tract surface water collects at many places in *chhams* or lakes for which the least destructive outlets have to be found. The Hudlara Drain starting from the Majitha Fort has been made the central feature of the scheme. Its natural bed has been deepened and trained and since 1927 it has been notified under section 55 of the Northern India Canal and Drainage Act. From this tahsil it passes on through Ajnala and Tarn Taran tahsils to the Lahore district collecting the dregs of the city sewage from the Ganda Nala on its way. Ten miles north of Amritsar town close to the Gurdaspur road the Gumtala drain begins to carry away the surface water of the north western part of the tract and after being joined by the Verka and Tung Dhab drains just north of the city turns west and ultimately joins the Hudlara Drain in the Ajnala tahsil. There are still many local defects and some estates suffer considerably but this drainage system has improved matters. It is not intended to cope with extraordinary conditions and it broke down after the heavy monsoon of 1933 when in the Amritsar Majitha-Kathunangal triangle of land water lay late into the winter and prevented *rabi* sowings on considerable areas. In 1934 I sought the co-

operation of the Irrigation Branch for the execution of some cheap schemes which would eliminate local troubles and so far as funds allow progress is being made. North of the Lahore Branch the Vadala Viram *chhamb* occupies an area of sixtyfive acres. An attempt has been made without much success to drain it towards the west. To short drains-the Ghosal and Tarpai-pour other surplus water in the same neighbourhood into the Lahore Branch. The trouble here is saturation rather than surface drainage. The canal carrying a considerable volume of water runs above the level of the surrounding country and there is every evidence of waterlogging. I have seen wells in which the depth to water was not more than three feet. The same is true to some extent of the northern reaches of the Main Branch above the point where it crosses the Gurdaspur metalled road. This tahsil does not show such progressive deterioration as is evident in Tarn Taran. Improvements in drainage have apparently retarded the advance of *kallar* and apart from the elimination of local defects in drainage the primary object of remedial measures must now be the reclamation of land which is still capable of cultivation.

The Hudiara Drain enters the Tarn Taran tahsil at Lahorimal, and leaves it at Rajatal. It now runs in a deep and well-defined bed, for an artificial channel has been cut for it. It follows the line of natural drainage from the flats near Majitha in the Amritsar tahsil, into which other artificial drains from the north and east of Amritsar city are led, before it reaches this tahsil, where it is swollen by the waters of the Attari and Padhiar drains and by the Amritsar Ganda Nala, which carries away the city's sewage and deposits so much of it as is not sold on the way in the Hudiara Drain. Further east is a nameless drainage entering the tahsil at Thathgarh, and leaving it at Naushahra Dhala. From Kasel southwards, it is now aligned in an artificial channel notified in 1930 as the Kasel-Padhana Drain which ultimately as the Deo-Padhana Drian joins the Hudiara Drain at Deo in the Lahore district. This connected series of drains serves its purpose sufficiently well and would

(b) Tarn Tarn
tahsil

be even more efficient but for the local practice of putting obstructions in the channels to secure irrigation when other water is not available. The utility of the Kasel-Padhana drain would be increased by side-drains from Leian and Gahri. East of the Main Branch Lower comes the drainage known as the Mandiala Rohi or the Sultanwind drain. Satisfactory drainage of its basin would involve considerable expenditure but a good deal has been done by relatively cheap projects to remedy the more obvious faults. Still further east come the Kasur Nala and the Patti Rohi. The former flows at places in a well-defined channel, and elsewhere is scarcely noticeable owing to cultivation in its bed the soil of which is generally hard and clayey. The Patti Rohi is for the greater part of its course shallow and indistinct with undulating sandy soil on its margins. Neither drainage does any great damage nowadays and digging has not been necessary except in the estates of Chambal, Jatta and Jowinda Kalan, where an artificial channel carries the water over rise in the ground.

The surface drainage of the Ajnala tahsil finds its natural outlet in the Sakki Nala but is obstructed by the Lahore Branch of the canal and its subsidiary channels. Water in the confined area to the left of the Branch now finds its way by various routes into the Hudlara Drain. On the right bank of the canal the Lashkri Nangal-Bagga drain collects water from the area north of Mananwala distributary, siphons it under the distributary and carries it along to the Mahalawala pond (*chhamb*) whence the reinforced stream is carried under the arterial road on past Bagga to the Sakki Nala at Saurian. This drain does its work efficiently enough provided it is regularly cleared and maintained. Silt clearance has been done twice since 1930 and now (1904) is about to be done again. There are local defects of drainage near Their and Mughlani Kot for which remedial schemes are under consideration.

Botany. The flora of the Amritsar district is of varied character and typical of a tract well suited for the growth of vegetation. The soil is fairly rich and deep and the spring-level high enough for roots to absorb

adequate moisture Moreover there is rainfall of moderate amount and fair certainty. These favourable conditions enable trees to grow luxuriantly and they are common around the city of Amritsar, headquarters of tahsils, and on roads. Shisham (*Dolbergia sisso*) and kikar (*Acacia arabica*) are the main timber trees and are very much liked for their hard wood, which is used for making furniture and agricultural implements. Jaman (*Eugenia jambolna*) and mango (*Mangifera indica*) are planted in many places on account of the value of their fruit and dense shade. Pipal (*Ficus religiosa*) and bor (*Ficus bengalensis*) which are favourite and sacred trees of the Hindus are much in evidence on wells and shrines both in the towns and villages. Other trees which have received special attention are varieties of mulberry, such as shahtut (*Morus alba*) and tut (*Morus laevigata*); ber (*Zizahpus jujuba*); dhrek or Persian lilac (*Melia azadirachta*); siris (*Albizzia lebbek*) a quick growing tree; and vilyati kikar (*Acacia farnesiana*) with fragrant flowers. A few plants of economic importance, such as sohanjana (*Moringa pterygos-perma*) the flowers and long pods of which are used for making pickles; kachnar (*Bauhinia variegata*) whose flower have a culinary use ; and lasura (*Cordia myxa*) the fruits of which are pickled, are found around wells and in gardens. Besides the above trees which are cultivated for special purposes, there are many others found in the parks and gardens of Amritsar and other towns of the district. Eucalyptus has taken to the soil very well. It has been introduced for its strong aromatic leaves and flowers which have medicinal properties and occupies a prominent place Toon (*Cedrela to na*) is a fine large shade tree. Simbal or silk cotton tree (*Bomba malabaricum*) is a huge tree and many have been grown in different places. Some graceful evergreen trees, like arjan (*Terminalia arjuna*), bahera (*Terminalia belerica*), sukh-chen (*Pongamia gulabra*), maulsari (*Mimusop elengi*) and amaltas or Indian laburnum (*Cassia fistula*) have also been put down in several orchards.

Amritsar provides excellent conditions for intensive cultivation of various kinds of economic plants which give a

handsome return from small areas. Of these, sucha gulab (*Rosa damascena*), the flowers of which are candied and also used for distilling *ark* and *itar*, is grown in special plots around the city. Motia (*Jasminum sambac*), chambeli (*Jasminum grandiflorum*) and bed mushak (*Salix caprea*) are of like commercial value.

The old arboreal vegetation of waste places consists of jand (*Prosopis spicigera*), karil (*Capparis aphylla*) whose berries are collected for pickling, and dhak or chichara (*Butea frondosa*) whose flowers are used as a dye and the leaves stitched up for making containers of sweetmeats etc. Along the Ravi and other moist places, there are found sar (*Saccharum sara*) kans (*Saccharum spontaneum*) pilchi (*Tamarix dioca*) and kundar (*Typha angustata*), which are used for making ropes, baskets, thatch and mats.

Among the grasses, baru (*Sorghum halepense*) and dab (*Eragrostis cynosuroides*) are very troublesome and make cultivation of the soil difficult. Grasses useful for fodder are khabal (*cynodon dactylon*) and madhana (*Eleusine aegyptica*). Palwan (*Andropogon pertusus*) and chimbar (*Eleusine flagellifera*) which come up in profusion after rains, although of poor quality, are used by poor people for feeding to cattle.

The large weeds which infest uncultivated tracts are ak or milk plant (*Calotropis procera*), arind (*Ricinus communis*), dhatura (*Datura fastuosa*) and thor (*Opuntia Dellinii*). As regards (*Opuntia*), it would be instructive to mention that wherever this plant has spread so widely as to be a nuisance and it is necessary to eradicate it, the cochineal insect (*Dactyl pius tomentosa*) should be introduced. This insect is a parasite of *Opuntia* and feeds on it voraciously. After a few days, the plants will be dead. Other noxious weeds and those which appear in crops and require attention for checking their growth are pohli or thistle (*Carthamus oxyacantha*), bhukat or piaz (*Asphodelus fistulosus*), shial kanta (*Argemone Mexicana*), bhakhra (*Tribulus terrestris*), kandyari (*Solanum xanthocarpum*), bhang (*Cannabis sativa*), Panj phuli (*Lantana camara*) has spread widely on account of its quick propagation. As this

plant is harmful to cattle, steps should be taken to uproot it. There is no better method of getting rid of it completely.

In ponds and other large bodies of water, there are found either in wild condition or specially grown several aquatic plants which are useful in various ways. Sanghara or water nut (*Trapa bispinosa*) is cultivated for its fruit which is roasted, and on removal of skin the kernel, which is rich in carbohydrate, is eaten. The shoots of the kanwal or bhen (*Nelumbium speciosum*) are relished as a vegetable. The flowers of nilofar (*Nymphaea lotus*) are used in medicine. Kunder (*Typha angustata*) grows wild on the bank of canals, rivers, ponds and lakes. Its long and thick leaves are used for making mats.

The fertile soil and ample water supply of the district provide very favourable conditions for growing fruits. For several miles outside Amritsar, there are flourishing fruit gardens. The chief fruit is nashpati or pear (*Pyrus communis*) of which a superior variety has been introduced in the last few years. Other successful fruits are the peach or aru (*Prunus persica*), the plum or alucha (*Prunus communis*), and various citrus fruits such as malta (*Citrus aurantium* Var), sinensis sangtra (*Citrus aurantium*) and lemon (*Citrus medica*). Banana (*Musa sapientum*) was grown largely some years back but has been discarded as its quality was poor compared with fruit coming from Calcutta and Bombay. Falsa (*Grewia asiatica*) is very remunerative for its high yield of small blue berries which are eaten or made into syrup. Loquat (*Eriobotrya japonica*) is also fairly common and successful. Lichi (*Nephelium litchi*), although not fully adapted to the climate, has been grown with special care and is yielding fruit. Mangoes (*Mangifera indica*) of fairly good quality are also found in some gardens.

7. The whole of the Amritsar district is composed of the recent deposits known collectively as the Indo-Gangetic alluvium.

Geology. This consists of alluvial sand, clay and loam, the only mineral product, apart from clay used for brick-making, being the concretionary form of calcium carbonate

known as *kankar*. It is found in beds generally at a slight depth below the surface, at the upper margin of the impermeable subsoil, whence it is excavated to form material for road-making. The method of its formation is as follows. A portion of rather porous soil, consisting of a mixture of lime, sand and clay, is infiltrated with water retained in it by an impermeable bottom. The carbonate of lime is deposited throughout this porous mass, and cements its particles together till it becomes of stony hardness. Deposit no doubt takes place along the outer surface, as each former minute crystal deposited acts as a nucleus for further deposits. The formation is often seen in an incomplete state, nodules of soil having become only partially hardened. The process is essentially one of segregation from the soil itself. The essential condition of its existence is the presence of carbonate of lime, or its ready production by ordinary decomposition in the soil. In soils and subsoils which supply little lime, there may be efflorescences without the formation of *kankar*, as in those consisting of clay and siliceous sand. On the other hand, in marly soils, in which there may be little production of alkaline salts, *kankar* may form without any efflorescence. In a district where stone road metal is not procurable unless imported, the presence of this *kankar* has considerable importance. It is also used for lime. The best *kankar* beds are found in Ajnala on the left bank of the Sakki from Karyal downwards, and between Kaler and Vadala Bhattewad. Good *kankar* is also found to the right and left of the Grand Trunk road near Jandiala Guru and at Varpal. In Tarn Taran, it is met with at Bala Chak and Gohlwar. In the administration paper of every village, a clause was inserted declaring that the *kankar* is the property of Government and may be dug for by Government when required without the payment of any royalty to the owners of the land. The owners, however, have liberty to dig for and use the *kankar* when it is not required by Government.

It is stated that saltpetre used to be manufactured in the Sikh times in the Ajnala Tahsil, where *kalar* wastes abound. The Punjab is the chief producing province of saltpetre in India.

Statistics of the number of concerns manufacturing the crude product are not available but there has been a recent increase in output, particularly from factories employing solar evaporation methods of manufacture at Amritsar amongst other places in the Punjab.

Coarse pottery clays-white, grey and black are dug for by potters, who use them in their trade and distinguish between the different varieties, but these call for no particular remark.

It is interesting to note that about 1909, a boring was put down in the grounds of the Khalsa College at Amritsar in the hope of striking artesian water but at a depth of 215 feet operations were suspended through lack of funds. The boring records show that at this depth the alluvium had not been pierced, but the Principal of the College stated that at 60 feet a practically unlimited supply of water was met though not under pressure. It may be recalled here that in the deep boring at Ambala of 1926-27, the bottom of the alluvium was not reached though that bore was sunk to a depth of 1,612 feet.

8. Game of all kinds is scarce in the district. An occasional Nilgai and Chinkara can still be found in the long grass in the river bed on the border of Kapurthala. A few black bucks wander about the *barani* area from Gaggar-bhana to Chola Sahib and with the spread of cultivation and canal irrigation it is rather remarkable that they have not altogether disappeared. A few wild hog are still to be found in the Beas river bed. They remain in the thick grass in Kapurthala State during the day and really only pay night visits to this district. Hares are fairly numerous and it is a common sight to see parties of youths hunting them especially after the *rabi* crop is cut. Wild geese and ducks of various kinds are to be found on both Beas and Ravi rivers in large flocks during the winter. The geese come in during the night and feed on the young wheat. If there are good autumn and winter rains ducks may still be found in fair quantities in *chhambs* in the Ajnala and Tarn Taran Tahsils. Black partridges are found near the river beds and in the central part of Tarn Taran tahsil near the Lahore border but they are few and far between. Grey partri-

Wild animals;
game

dges are more widespread but they also are very few and if a dozen fall to a shooting party in a day it can be considered they have done well. A few snipe are found at Jastarwal in the Ajnala tahsil and in pools in the Beas bet. The common crane is common in the early winter but the demoiselle crane is hardly ever seen. The black curlew is to be met with inland, and the more wary jackcurlew on the sandy stretches of the Beas valley. Quail come in, as elsewhere, in April and September and are much netted near the city, while sandgrouse of the two common varieties may always be seen on the *moth* stubbles of the Jandiala sand ridge, and on the sandier parts of the Ajnala Uthar near Chamiani. Obara are rarely met. Green pigeon frequent the pipal trees and canal plantations but not in large numbers. The blue rock pigeon is much more common, and there are many in the cliffs overlooking the Beas. The Punjab Wild Birds and Wild Animals Protection Act, 1933 has had the effect if not of increasing game at least of calling a halt to its further depletion. There is a District Fauna Committee which employs half a dozen Game Watchers to see that the provision of the Act are observed. Fishing on both Beas and Ravi is now practically non-existent. Poaching with nets has more or less killed off the whole supply. The only venomous snakes which are met with are the cobra, the karait the Russell's viper and the small keel-scaled viper (*echis carinata*). Of these the echis is the most common, and perhaps the karait the next. The *kallar* wastes of Ajnala are notorious for harbouring venomous snakes. The canal contains many fresh-water snakes but they are all harmless. Jackals are common everywhere.

9. The comparative mildness of the climate of the district can be ascribed to the proximity of the hills, higher humidity, greater cloudiness and more extensive vegetation than some other districts enjoy. High winds and dust-storms are most frequent in May and June. Hailstorms are not very common phenomena, the most favourable months for their occurrence being February to June and the frequency of their occurrence in any month being only once in five to ten years.

Climate

10. The average annual rainfall has declined from 23·14 inches at last settlement to 21·93 inches now but the loss has been in the monsoon for the winter rains of both

Rainfall.

periods are on a par. Averages are however apt to obscure facts and it is worth notice that in Tarn Taran tahsil where alone there has been no appreciable change, the average annual rainfall for the last ten years is five inches less than it was in the first decade of the period and the loss relatively greater in the winter than in the monsoon. This tahsil also shows much the biggest range of variation with as little as ten inches and as much as 48·78 inches. The three tahsils are now much more on a par than they used to be, Tarn Taran which at last settlement returned an inch less than the other two tahsils being now slightly better than either of them with 22·09 inches. Ajnala follows with 22·02 inches while Amritsar has fallen to 21·68 inches. Of the district average of 21·93 inches, 16·3 inches are monsoon rain and 5·63 inches winter rain. It is commonly stated that an annual fall of twenty inches of rain is enough to mature *barani* crops but the bitter complaints of rainfall short in quantity and untimely in season suggest that the Amritsar farmer either has not heard of this or is not sufficiently scientific to take advantage of it.

SECTION B — HISTORY

1. There are no architectural remains in the Amritsar district of any great interest. The city of Amritsar is comparatively modern, and the same may be said of Tarn

Architectural objects
and remains.

Taran and Jandiala. The only relics of Muhammadan rule which need be mentioned are the remains of the imperial *caravanserais* at Sarai Amanat Khan, Nurdin, Naurangabad, and Fatehabad, in the Tarn Taran tahsil. These were built on the old road from Lahore to Delhi, which entered the district near Atari, and ran past the villages named above, crossing the Beas near Goindwal. Little is left of the Sarais but the gateways, and these are fast falling into ruins. The space inside the sarais has been occupied

by the houses of the agriculturists and the shops of the village traders, and besides the gateways, over which in some cases blue enamelled tiles have been let into the masonry, the more or less ruined walls of the sarais are still standing. A few of the pillars, or *kos minars*, which marked the course of the road are also still to be seen at intervals. Round Sarai Amanat Khan and Fatehabad are the ruins of old Muhammadan tombs of the usual type. At Lalla Afghanan and at Bagga in the Ajnala tahsil, are two large mounds, or *thehs*, which mark the site of towns of some size. Some years ago an enterprising Parsi merchant began to excavate the mound at the first named village, and is said to have come upon some old carvings, but he gave up the undertaking as unprofitable. The other was used for a time by a contractor as a quarry for the Pathankot Railway, but he was stopped from doing so by the villagers when they found the stuff was marketable.

2. The chief objects of architectural interest are the Sikh temples at Amritsar, Tarn Taran, Khadur Sahib, Important buildings. Goindwal and Ramdas, but no one of these is as much as three hundred years old, and they derive their interest from their associations and the reverence in which they are held. The temple or Darbar Sahib at Amritsar stands in the centre of a large tank surrounded by a marble *parkarma* or pavement which is connected with it by a causeway also paved with marble. The temple is profusely gilt over copper outside and beautifully decorated with paint and mosaic inside. The tank at Tarn Taran presents much the same appearance, but there the temple, also bright with gilding, stands on the edge of the water instead of in the centre. Like that at Amritsar it is quite a small building, and near it stands a *minar* or tower of masonry work which is visible on a clear day ten miles away. The other temples named have no noteworthy surroundings and are crowded in by houses and shops. They have hardly any of the expensive gilding, which is the chief feature of the shrines at Amritsar and Tarn Taran, and the interior decoration is on a much smaller scale. The only other

buildings that need be mentioned are the tower of Baba Atal, built over the ashes of the son of Hargobind the sixth Guru, close to the Amritsar Darbar Sahib; and the fort of Govindgarh, just outside the city walls, which was built by Maharaja Ranjit Singh in 1809.

3. The interest of the history of this portion of the Punjab, the fertile central *doabs* commences with the rise of the Sikh religion and power. There is no mention of any important city like Sirhind, or seat of government like Lahore, having existed in what is now the Amritsar district, in the days of ancient Hindu sovereignty. It was probably under the rule of the Kings of Lahore, and was a purely agricultural tract, peopled by the progenitors of the Jats, the peasant proprietors of to-day.

4. The real origin of the Jat is a point which is always likely to remain in dispute. One authority, General Cunningham, maintains that the two tribes of Jats and Meds were the first Indo-Scythian conquerors of this part of Hindustan, and that towards the end of the second century before Christ they emigrated from the country south of the Oxus, at some time later than the Macedonian invasion, the historians of which do not mention them as being found in the Punjab. He professes to have found proof of their having both been firmly established in Sind and the Indus valley, whither the Meds migrated from the Upper Punjab, the tract which they first occupied. Thereafter they again spread over the Punjab. Other authorities look upon the Jats as having had their origin in Jaisalmir and Rajputana and having gradually occupied the Punjab from that direction. The matter is one of purely antiquarian interest and need not be further discussed here. The commonest tradition among the people themselves is that they are of Rajput origin and came from the east rather than from the west.

5. However this may be, it was in 1023 A. D. that Sultan Mahmud established the Muhammadan power in Lahore and the Punjab. From that time, until the final overthrow by the Sikhs of the Muhammadan supremacy, the Amritsar district was attached to the *suba* or province of Lahore and was ruled by the Moghal Governor whose headquarters were at that city. The district lies on the road usually taken by the invading Muhammadan armies, and was thus liable to be plundered and devastated at each incursion, but, as it does not appear to have then contained cities famous for their wealth, it is possible that it may have been looted and laid waste to a less extent than its neighbours, the invaders preferring to push on to Sirhind and Delhi after leaving Lahore. This may partly account for the comparative absence of the extensive mounds or *thehs* marking the sites of deserted villages, which are so often met in districts to the west of Amritsar.

6. From the eleventh to the end of the fifteenth century, then, there is nothing to call for special notice in the history of this part of the central tract of the Punjab. It was shortly after the middle of the fifteenth century in 1469 that Nanak, the first Guru, the founder of the Sikh religion, was born at the village of Talwandi in the Lahore district (now Nankana Sahib in the Sheikhpura district). His father is said to have been a village accountant (*patwari*) of the Khatri caste. Nanak himself early took to the life of a devotee, and travelled over most of India, but his history is no way specially connected with that of the Amritsar district. He died at Kartarpur in the Gurdaspur district in the year 1539, leaving behind him the writings which contain the exposition of the faith of the Sikhs, (literally, disciples) and a numerous band of disciples. Nanak was no more than a religious reformer. He does not appear to have claimed for himself any special divinity. Nanak's reforms were in their immediate effect religious and moral only. His name is perhaps more closely associated with Vairawal and Ramdas than

with other villages in Amritsar. From the former came several of his disciples, and the temple at Ramdas was founded by Baba Buddha, one of his immediate followers. The second Guru was Angad, the most trusted disciple of Nanak, who on Nanak's death was acknowledged by the Sikhs as the teacher of the new faith. As such he continued until his death in 1552 at Khadur Sahib, a large village in the east of the Tarn Taran tahsil, where there are a temple and a tank sacred to his memory, supported by a jagir from Government. Little is known of his ministry, and on his death his mantle descended to Amar Das, one of the most devoted of his followers. Amar Das is chiefly remarkable for having separated his disciples from the Udasi sect founded by the son of Guru Nanak, most of whom at the present time are ascetics pure and simple. The name of Amar Das is connected with the village of Goindwal, close to Khadur Sahib in Tarn Taran, where he lived and died. Here there is a temple known by the name of the Baoli Sahib from the *baoli* or well connected with the ground level by a flight of steps, which is its special feature. To him succeeded Ramdas, the fourth Guru, who obtained from the Emperor Akbar the grant of a piece of land, where now stands the city of Amritsar. Here in 1577 he began to excavate a tank and to build a temple in its centre. But he did not live to see it finished, dying seven years after he succeeded his father-in-law. Next came Guru Arjan. He is said to have made Amritsar the headquarters of his following. He completed the digging of the tank, and a new city began to grow up round the sacred pool. In 1590 he built a similar temple with tank at Tarn Taran. Guru Arjan was more of an administrator than his predecessors. They had been content to wander about the country with a small band of disciples preaching the doctrines of Nanak and teaching social service. Of Guru Arjan it is said that he collected and arranged the writings of his predecessors, reduced to a system the customary offerings of his adherents, and appointed agents (*masands*) to collect these offerings wherever his followers were to be found. His predecessors had merely been devotees, but Guru Arjan, according to Cunningham, who quotes what he

states to be the ordinary Sikh accounts, encouraged his disciples to visit foreign countries and combine business with religion. We now begin to hear of horsecoping and banking, carpentry and embroidery among the Sikhs. The Guru was himself a man of name and wealth, and his influence extended over Hindus and Muslims to such an extent that he incurred the wrath of the Emperor Jahangir who saw in him a man of dangerous ambition. Hearing a report that the Guru had shown sympathy towards Prince Khuisan who had rebelled against his father, Jahangir ordered him to be thrown into prison and, if we believe the account given in *Tuzak-i-Jahangiri*, the Guru's death was caused directly by the orders of the Emperor in 1606.

But he left his following very different from what he found it. Belief in the principles expounded by Nanak had been growing rapidly under his direction, and under that of his son, Hargovind, the sixth Guru. The teaching of Guru Arjan had borne fruit, and the combination of secular with spiritual occupations had done much to popularise the faith. Hargovind went further and became a military leader as well as a spiritual teacher. Moreover he had his father's fate to avoid. He gathered and kept up a numerous band of armed and mounted followers, ready for any service. To quote again from Cunningham, "the impulse which Guru Hargovind gave to the Sikhs, was such as to separate them a long way from all Hindu sects and now the disciples were in little danger of relapsing into the limited merit or inutility of monks or medicants". Though often in attendance upon the Emperor, Hargovind's independence embroiled him with the authorities at Lahore. He is heard of as in prison at Gwalior, engaging the imperial troops in battle near Amritsar and accompanying the imperial camp with his followers to Kashmir. He died in 1644 and after him came Har Rai and then Har Kishen, both of whom are connected more with the Hoshiarpur district than with Amritsar. The ninth Guru was Tegh Bahadur who, with many of his followers, had taken up his abode at Baba Bakala in the Amritsar tahsil not far from Khadur Sahib and Goindwal. Eleven years afterwards Tegh Bahadur who, like his father Hargovind, was a

martial leader as well as a religious reformer, was put to death as a rebel at Delhi by the Emperor Aurangzeb. He left a son, then aged nine years, who became the tenth and last of the Gurus, under the name of Govind Singh. He for many years remained in obscurity, from which he emerged the acknowledged leader of the Sikhs, declaring that he had a double mission to perform, to avenge the death of his father and to free his people from the oppressive bigotry of Muhammadan rule under the Emperor Aurangzeb. It was at this time that the Sikh community first took to itself the distinctive name of the Khalsa, the pure or the chosen people. The Guru preached that they must surrender themselves wholly to their faith and it was he who prescribed the *khande di pahul*, or simple initiatory ceremony, now performed by all Sikhs on taking up the faith. He taught them the hatred of idolatry which has also distinguished the orthodox Sikhs, and that adoration was alone permitted in the case of the sacred book and to his teaching is due the practice of wearing the hair unshorn, the taking of the Surname Singh, and the use of steel. But so long as the power of the Emperor Aurangzeb remained unbroken, the Guru could do little towards the fulfilment of his mission. A force was sent against him which dispersed his followers and compelled him to fly from Anandpur in the Hoshiarpur district where he had established himself, to the wastes of Bhatinda. But his opportunity came on the death of Aurangzeb in 1707. Govind Singh assembled his forces and marched again towards the Sutlej during the disturbed times which succeeded the Emperor's death, and might have done much to establish the name of the Khalsa, but for his assassination in the following year 1708 at Naderh on the banks of the Godaverī.

7. He was succeeded by the Bairagi Madho Dass who as Banda became his chosen disciple, round whom the Sikhs again gathered. Banda established himself at Gurdaspur, and for a time held his own against the Muhammadan forces, but was finally overcome by Abdul Samand Khan, the Governor of Lahore and begin

Situation of the Sikhs
after the death of the
tenth Guru.

taken prisoner, was tortured and put to death at Delhi in the year 1716,

The situation of the Sikhs at the death of Banda is thus summed up by Cunningham : "After the death of Banda an active persecution was kept up against the Sikhs whose losses in battle had been great and depressing. All who could be seized had to suffer death or to renounce their faith. A price indeed was put upon their heads, and so vigorously were the measures of prudence, or of vengeance, followed up, that many conformed to Hinduism, others abandoned the outward sign of their belief, and the more sincere had to seek a refuge among the recesses of the hills or in the woods to the south of the Sutlej. The Sikhs were scarcely again heard of in history for the period of a generation.

Thus, at the end of two centuries, had the Sikh faith become established as a prevailing sentiment, and guiding principle, to work its way in the world. Nanak disengaged his little society of worshippers from Hindu idolatry and Muhammadan superstition, and placed them free on a broad basis of religious and moral purity. Amar Das preserved the infant community from declining into a sect of quietists or ascetics, Arjan gave his increasing followers a written rule of conduct and a civil organisation; Hargovind added the use of arms and a military system; and Govind Singh bestowed upon them a distinct political existence and inspired them with the desire of being socially free and nationally independent."

8. In 1737 Baji Rao, the Mahratta Peshwa, appeared in arms before Delhi, and two years later came the Durani invasions. invasion of the Punjab by Nadir Shah. The difficulties of their hereditary enemies were the Sikhs' opportunity and collecting in small bands they plundered the stragglers of the Persian army and the wealthy inhabitants of the larger towns. But they had no recognised leader and, when the invaders had retired, the Sikhs were easily subdued by Zakariya Khan the Viceroy of Lahore. But now they began to visit Amritsar openly instead of in secrecy and disguise, to make their devotions at the temple. Nadir Shah was assassinated in 1747, and his place was

taken by Ahmad Shah Abdali, who in the same year entered the Punjab at the head of an army and put to flight the new Governor of Lahore, Shah Nawaz Khan. But he got no further than Sirhind and was forced to retire, and Mir Manu assumed the viceroyalty at Lahore. The Sikhs who had thrown up a fort at Amritsar, which they called Ram Rauni, at once began to give him trouble. But they were suppressed without difficulty and their fort was taken. Then followed another invasion by Ahmad Shah, which was again the signal for a rising of the Sikhs, who possessed themselves of the country round Amritsar only to be defeated again by Adina Beg, who was acting under the orders of Mir Manu. At this time we hear of Sikh leaders coming into prominence, among them Jassa Singh, *Kalal*, and Jassa Singh, carpenter, who restored the Ram Rauni at Amritsar. It was however again demolished by Prince Timur son of Ahmad Shah Abdali who dispersed the insurgent Sikhs, levelled the buildings to the ground and threw the debris into the sacred tank. This last insult inspired the Sikhs to fresh exertions, and gathering under Jassa Singh Kalal they attacked and took Lahore. The Muhammadans called in the aid of the Mahrattas, the Afghan garrison left by Ahmad Shah was driven out, and the Sikhs evacuated Lahore. A period of an anarchy followed, leading to the return of Ahmad Shah and the total overthrow of the Mahratta power in Northern India at Panipat in 1761. Lahore remained in possession of the Afghans, for the Delhi dynasty was on the wane, but they had to settle with the Sikhs who continued in revolt against whatever was the constituted Government. Some successes were gained by the Sikhs, and the army of the Khalsa assembled at Amritsar and again performed their ablutions at the sacred pool. But a disaster greater than any they had experienced since the overthrow of Banda was at hand. Ahmad Shah returned to the support of his lieutenants, and in 1762, overtaking the Sikhs near Ludhiana utterly defeated them in an action which is still referred to as the *ghalu gara* or the holocaust. On his way back, Ahmad Shah passed by Amritsar, where he razed the restored temple to the ground and polluted the sacred pool by the slaughter of cows.

9. But this was the last occasion which the temple was desecrated. It was rebuilt in 1764 and year by year, the Khalsa gaining strength met at the sacred tank at the festival of the Dewali. The Sikhs began to divide the country among themselves, and to break up into rival principalities or *misl*s, several of which had their headquarters in the Amritsar district and drew their forces from the hardy Jat peasantry, which during the troubled times of the first half of the eighteenth century had held its own in the district. The chief *misl*s connected with Amritsar were the Bhangis, the Ramgharias, the Ahluwalias and the Kanhayas. Of these the Bhangis were the first to rise into prominence. Their country extended north from their strong holds at Lahore and Amritsar to the river Jhelum and then down its banks. The Kanhayas were supreme between Amritsar and the hills and the Ahluwalias in the Jullundur Doab, whence they often spread into the *Manjha* as the country now comprised in the Tarn Taran and Kasur tahsils came to be called. The Ramgharias held part of the plains lying to the south of the Sutlej and were also powerful in part of the Gurdaspur district. They took their name from the fort of Ram Rauni, already mentioned as having been established to guard the sacred temple at Amritsar, which was re-named Ramgarh or the fort of God, by Jassa Singh the carpenter. To this day the Sikh carpenter loves to describe himself, not as a *tarkhan*, but as a Ramgarhia, and though they form a distinct caste they possess all the good qualities and martial spirit of the Sikh Jats. Mention must also be made of the Nihangs or Akalis, a band of warlike enthusiasts who constituted themselves the armed guardians of the Amritsar temple, and devoted their spare time to plundering their weaker neighbours with impartiality. They adopted arms as their profession, and, subsequently under Maharaja Ranjit Singh, they formed a prominent part of the Sikh army, though well known for their unruly character and impatience of control.

Partion of territory
among Sikh
confederacies.

10. It would be tedious to trace in detail the fortunes of the different *misl*s, nor have their rise and fall any special connection with the history of Amritsar. The power of the Bhangis under Jhanda Singh soon received a check from the Kanhayas led by Jai Singh and their allies the Sukarchakias, whose chief was Charat Singh grandfather of the great Maharaja. But they still held Lahore and Amritsar, and after this are heard of more in the direction of Multan than elsewhere. Next the Kanhayas and the Ahluwalias combined, and forced the Ramgarhias to retire from their possessions near the Beas and retreat towards Hissar. Maha Singh was by time the leader of the Sukarchakias, and was taken under the protection of Jai Singh Kanhaya but shortly separated from him and allied himself with the Ramgarhias with whose help he defeated the Kanhayas. The Ramgarhias thus regained their possessions along the Beas. We next hear of a second alliance between the Kanhayas and the Sukarchakias, this time of a more lasting character. Maha Singh was dead but had been succeeded by his son Ranjit Singh, who cemented the alliance by marrying the daughter of Mai Sada Kaur, the widowed daughter-in-law of Jai Singh Kanhaya. This union laid the foundation of the power of Ranjit Singh, for the Kanhayas, under the able leadership of Mai Sada Kaur, were the most powerful confederacy of that time. In 1799 Ranjit Singh seized Lahore from the Bhangis, who had then no leader of any note, and made it his capital. He strengthened his position by a friendly alliance with Fateh Singh, Ahluwalia whom he met at Tarn Taran, and with whom he exchanged turbans in token of eternal friendship. He then forced the Bhangis to retire from Amritsar in 1802 and step by step overcoming all opposition from the remnants of the other *misl*s, gradually established the kingdom of Lahore.

11. Amritsar was the place where Ranjit Singh met Jaswant Rao Holkar in 1805 and Mr. Metcalfe in 1809. Here he signed the treaty by which he was acknowledged by the British as the ruler of those provinces which he held at the time south of the Sutlej and undertook on his part not to extend his dominions further

The condition of the
central districts
under Sikh rule.

in the direction of the protected States south of the Sutlej. In this treaty we find him styled the Raja of Lahore. In 1809 too he completed the building of a fort at Amritsar, which was named Gobindgarh. From this time forward he gradually consolidated his power, and made himself absolute in the Punjab.

The district was divided into *talukas* each with its separate Governor or *Kardar* who paid a fixed amount into the Treasury at Lahore and took from the people as much as he safely could.

The original *talukas* were as follows :

- (a) in pargana (or tehsil) Amritsar :
 - (i) Jandiala, Butala, Sathiala, Bundala and Mahtabkot, in the southern half of the tahsil, were acquired and held by the Ahluwalia Sardar Jassa Singh and Fattah Singh. Maharaja Ranjit Singh seized the tract about the year Sambat 1882 (1825 A. D.) ;
 - (ii) Mattewal on the Gurdaspur border was held by the Ramgarhia Sardars and escheated to the Maharaja in Sambat 1872 (1815 A. D.) ;
 - (iii) Chawinda, a part of the Kanhaya estate, seized by the Maharaja from Mai Sada Kaur and granted to Prince Sher Singh in jagir ;
 - (iv) Majitha belonged to Sardar Dial Singh Gil ;
 - (v) Amritsar originally belonged to the sardars of different clans, the Bhangi, the Ramgarhia, the Kanhaya, and the Saurianwala from whom the Maharaja gradually seized the tract about 1809 ; and
 - (vi) Gilwali, part of the estate of the Kanhaya Sardars, was held in jagir by the brother's son of Mai Sada Kaur, Sardar Gurdit Singh ;
- (b) in pargana Larn Taran :
 - (i) Jalalabad, Vairowal, Kot Mahmud Khan belonged to the Ahluwalia sardars in the same way as *taluka* Jandiala above. Were managed under the Maharaja by Sardar Lanna Singh Majithia and Mistr Sahib Dial ;

- (ii) Sirhali also managed by Sardar Lehna Singh under the Maharaja ;
 - (iii) Tarn Taran belonged to the Bhangis, afterwards to the Khanwala Sardars Dal Singh and Fatteh Singh ; and
 - (iv) Khapar Kheri belonged to the Singhpuria sardars ; now partly included in Tehsil Amritsar.
- (c) in pargana Saurian now tehsil Ajnala.
- (i) Saurian, Jagdeo belonged to Sardar Jodh Singh of Saurian. Taken by Maharaja Ranjit Singh in 1891 Sambat (1834 A. D.) ;
 - (ii) Chhina belonged to Sardar Karam Singh of Chhina, whose family still holds a jagir in this vicinity ;
 - (iii) Sainsra originally belonged to Sardar Dewan Singh of Sainsra. Afterwards received in jagir by the Sindhanwalia sardars from Maharaja Ranjit Singh ;
 - (iv) Thoba formed part of the estate of the Kanhaya sardars and was included in the *ilaga* of Chattargarh ;
 - (v) Panjgrain a part of the Kanhaya estate, afterwards came into the possession of the Sindhanwalia sardars ;
 - (vi) Chamiari was seized by Nar Singh of Chamiari whose decendants still hold a jagir there ;
 - (vii) Ghonewala originally belonged to Sardar Jodh Singh Saurianwala and afterwards came into the possession of Sardar Nar Singh of Chamiari ; and
 - (viii) Karial part of the possessions of Sardar Jodh Singh of Saurian.

12. During the reign of Maharaja Ranjit Singh the city of Amritsar increased in importance, took its place as the religious capital of the Silks, and was frequently visited by the Maharaja. It was there that he received Governor-General, Lord Auckland, before the first Afgan war. Many of the leading men at the court of Lahore were intimately connected with the district, such as Lehna Singh of Majitha, the Sindhanwalia chiefs (who

Amritsar from the death of the Maharaja Ranjit Singh up to annexation by the British.

belonged to the same family as the Maharaja), and Sardar Sham Singh of Atari whose daughter was in 1837 married to the grandson of the Maharaja. Ranjit Singh died on the 27th June, 1839 and was succeeded by his son Maharaja Kharak Singh, who died in the following year. His son and presumptive successor, Nau Nihal Singh, died in suspicious circumstances while returning from the cremation. Then followed the short reign of Sher Singh, who was murdered in 1843, when the young Prince Dalip Singh took his place and was proclaimed Maharaja. None of the events of the first Sikh war took place in Amritsar, the scene of them being entirely on the left bank of the Sutlej. Thereafter the British troops crossed the Sutlej and occupied Lahore, withdrawing in March 1846 when arrangements for the government of the country had been made and the treaties signed. It was agreed that there should be perpetual peace and friendship between the British Government on the one part and Maharaja Dalip Singh on the other. The Jullundur Doab was ceded by the Lahore Darbar to the British and the greater part of the troops withdrew from the Bari Doab, leaving only sufficient to act as a guard to the Resident appointed to the Court at Lahore and for the protection of the Maharaja. Of the eight members of the Council of Regency three were drawn from the most powerful families of the Amritsar district, the Sindhanwalia, Majithia and Atariwala. A fourth was Sardar Atar Singh of Kala, a village just outside Amritsar City. Peace lasted till 1848, when the Sikh rebellion, headed by two of the Sardars of Atari, took place, the chief result of which was that the Governor-General found himself forced to annex the rest of the Punjab.

13. The existence of Amritsar as a district dates from the beginning of 1849. Mr. L. Saunders took charge in April of that year as Deputy Commissioner. As at first formed, the district contained four tahsils : Amritsar, Farn Taran, Ajnala and Raya (or Narowal). The last, which separated by the River Ravi from the rest of Amritsar was transferred to the Sialkot district in 1867. At the same time the Batala tahsil was added to the

Formation of the district and alteration in limits.

Amritsar district from Gurdaspur, but the arrangement was found to be inconvenient, and was objected to by the people. It was restored to Gurdaspur in 1869. The boundaries of the three remaining tahsils have not always been as they now are. The villages immediately round Atari were included in the Lahore district up to 1854 when they were added to Amritsar during the first regular settlement. The south east of the present Amritsar tahsil, corresponding roughly with the Sikh *talukas* of Sathiala and Butala, belonged to Tarn Taran while at the north end of the tahsil there are groups of villages, now in Ajnala and Tarn Taran which until 1854 were included in Amritsar. To straighten the tahsil boundaries, which were very struggling and inconvenient and to bring all the Grand Trunk road below Amritsar city into the Amritsar tahsil, various transfers of villages were made, but all before 1854, and since that date the limits of the three tahsils which now form the district have remained substantially the same. From 1849 to 1859 the district formed part of the division controlled by the Commissioner of Lahore. In the latter year a new division was formed with its headquarters at Amritsar and including the districts of Sialkot, Amritsar and Gurdaspur. This arrangement continued until November 1884, when the Punjab Commission was reorganised and the commissionerships were reduced from ten to six. This threw Amritsar into the Lahore division.

14. From the Punjab Mutiny Report it appears that the administrative importance of Amritsar was fully appreciated in the events of 1857. On it might be expected

The Mutiny.

to turn the loyalty of the Khalsa. It was a source of much uneasiness that the stronghold was occupied by a detachment of the 59th Native Infantry with only 70 European Artillerymen. Captain Lawrence, Captain of Police, and Mr. Roberts, Commissioner, drove over on the 13th May, immediately after the disarming at Meean Meer, to arrange for its safety. On their return to Lahore the following day, they represented to Brigadier Corbett the urgent necessity for pushing a body of European foot into it. He instantly complied and, notwith-

standing the alarming events of that day elsewhere, half a company of the 81st. Foot was run across the same night in *ekkas* or gigs. It entered Govindgarh peaceably by dawn of the 15th. The 59th still remained in the fort, but as soon as Europeans were available they took their place. The 59th was disarmed by Brigadier-General Nicholson, commanding the mobile column, on the 9th July. As soon as the outbreak occurred one of the first measures adopted by Mr. Cooper, Deputy Commissioner, was to provision fort Govindgarh. This was rapidly and thoroughly effected without exciting any particular notice, and the fort then became one of our trusty bulwarks, which it had not hitherto been. Mr. Mac Naghten, Assistant Commissioner, at the same time went out on the Lahore road to raise the country (a part of the Manjha) against any deserters who might come by. Rewards were offered for any sepoy who had deserted; the latent martial spirit of the people was kindled into a flame; and escape for a deserter was impossible for every village was a nest of hornets for him. The temper of the people was one great cause of the achievement which has made the Amritsar district famous in the annals of 1857. On the 31st July a large body of disarmed sepoys appeared on the left bank of the Ravi, near Bal ferry asking for information as to the fords. The people's anxious attention was aroused. They diverted the sepoys for a few hours with various pretences, while runners hastened away to the neighbouring tahsil of Ajnala and even on to Amritsar. Prem Nath, tahsildar of Ajnala quickly brought every available policeman he had, and it was found that the men were the 6th. Native Infantry who had mutinied the previous day at Lahore, and, after committing four murders, had travelled across country, off the main lines of communication, forty miles in nineteen hours. A fight ensued: 150 men fell under the resolution of the villagers and police. By 4 p.m. Mr. Cooper arrived with some 80 horse accompanied by Sardar Jodh Singh, Extra Assistant, an old Sikh chieftain. The mutineers had escaped by a ford to an island in midstream. They were captured and executed next morning, forty-five having died during the night from fatigue and exhaustion.

Many Sikhs, however, on service with their regiments in the North-Western Provinces, failed their country and their masters. Many were drawn into the vortex of revolt, and after the fall of Delhi tried to steal home. A close search was made for them. When the regiments to which they belonged had murdered their officers the men were executed. In other cases they were punished by different terms of imprisonment. This operation was carried on, more or less, throughout the Punjab but it is here noticed as many of them had their homes in this district. The usual amount of disaffection was found amongst the Hindustanis in the district, and the same precautions were adopted as elsewhere in regard to their letters, stoppage of the ferries, and the expulsion of vagrants and emissaries from Delhi. Mr. Aitchison, Assistant Commissioner, was despatched on two occasions into the interior to guard a river or to give confidence to a subdivision, and Mr Cooper himself for many weeks remained out on patrol duty every night until past midnight. Captain Parkins, Assistant Commissioner, had charge of the recruiting department, and Mr. MacNaghten, Assistant Commissioner, showed considerable courage in the apprehension of an incendiary named Bhai Maharaj Singh and in his voluntary expedition to Atari on May 14th to raise the country. Here he was willingly seconded by Diwan Narain Singh, the agent of Sardar Khan Singh, Atariwala. A sepoy and a native doctor of the 35th Native Infantry were hanged at different times for seditious language. The executions produced a marked change in the demeanour of the people and the moral effect of the presence of General Nicholson's mobile column at different periods, aggregating about a month, was great. It might have been expected that the subscription to the six per cent loan from the wealthy cities of Amritsar and Lahore, would have been large. The opposite was the case. Their contributions were inappreciable. Men worth half a crore of rupees offered a subscription of Rs 1 000/- and others on the same scale. Their niggardly distrust of our Government spoke very unfavourably for their loyalty, and was in strong contrast with the eager co-operation of the rural population.

15. The failure of the monsoon in 1868 and 1869 was the next event of note. Much distress was caused in the south of the district, particularly among the menial classes, by the absence of rain in these two seasons. The presence of the city increased the difficulties of the district, for its reputed wealth made it a centre to which distressed persons were attracted both from British and foreign territory, and there were at one time many thousands of immigrants in the city and its neighbourhood, subsisting wholly upon charity. Relief works such as roads from Tarn Taran to Jandiala, Vairawal, and Harike ferry, and from the city to Ajnala on which labour was paid at famine rates, were started. Houses from which the poor might be fed were opened in Amritsar city and at the tahsils and the work of filling in the great ditch from which the materials for the ramparts had been excavated, and which was a fruitful source of disease, was begun. Nearly 3,000 labourers a day were employed on this work alone. The works were brought to a close in April 1869 after winter rain had removed the chief fear of famine, but had to be reopened in August when the monsoon again failed. This time the Ahluwalia Dhab, a morass in the centre of the city, was the relief work and from first to last nearly a lakh of labourers was employed on filling it up. The price of wheat rose to $9\frac{1}{2}$ seers a rupee. At the time it was remarked that the attraction of high prices might tend to denude the district of stocks, and leave a tract naturally rich and self-supporting in a bad way when famine comes. Amritsar may now suffer from scarcity, which may react on the cattle on which so much depends, but it is not likely with its present advantages ever to suffer from actual famine.

SECTION C.—POPULATION.

1. At the census of 1951 the provincial pressure of population per square mile of rural area was 209, per square mile of sown area 426, and per square mile of matured area 436. The corresponding figures for this district were 527, 546 and 589. Amritsar stood third among the districts of the province in absolute density and eighth and tenth respectively in relation to density on sown and matured area.

Density and
distribution of
population.

The pressure of population varies considerably from tahsil to tahsil—588 people to the rural square mile in Amritsar, 514 in Tarn Taran and 481 in Ajnala. A clearer indication of the increasing strain on the natural resources of the district is given by the pressure of population per square mile of cultivated area 713 in Amritsar, 636 in Tarn Taran and 757 in Ajnala and as the following more detailed table shows this strain is not equally distributed throughout the district, for the highest figure comes from the weakest tahsil.

Tahsil.	Amritsar.				Tarn Taran				Ajnala.		
Assessment circle	Bet Bangar	Jandiala	Nahri	Mirankot	Upper Manjha	Central Manjha	Bet Bangar	Sailab	Hithar	Uthar	Nahri
Population per square mile of cultivated area.	702	609	825	688	675	625	686	573	610	829	894

Fortunately however the two weakest circles in the district (The Sailab and Hithar) have the smallest population although even among the weak there is a disparity between density and resources for another circle of indifferent prosperity (the Bet Bangar of Tarn Taran tahsil) is densely populated. The average number of persons living in a village is 851 in Amritsar tahsil, 918 in Tarn Taran tahsil and 613 in Ajnala tahsil.

These figures take no account of towns—Amritsar, Jandiala, Majitha and Sultanwind in Amritsar tahsil; Tarn Taran in Tarn Taran tahsil; and Ramdas in Ajnala tahsil. Taking rural and

urban area together density of population per square mile in the census of 1931 was 711, an increase of 143 people per square mile in fifty years. Amritsar city was the largest town in the province up to 1881 since when it has yielded first place to Lahore. In the fifty years between 1881 and 1931 the growth of the city has twice recorded a check (at the censuses of 1891 and 1911) but in the latest census leaped far ahead of anything previously reached. In the decade ending 1931 the population increased by two-thirds to 264,840. Natural increase alone does not account for this startling rise in which artificial causes like immigration have played a big part. The density of population per square mile in the city is 24,844, which shows it to be a much more congested area than Lahore city where the density is only 15,352.

2. Between the last two censuses the provincial population increased by 13·9 percent while in the half-century ending in the same year (1931) the increase was 39·2 percent. In these fifty years the population of Amritsar has grown much less rapidly and is now only 25 percent more than it was in 1881; but the rate of increase in the last decade (20·2 percent), has been well ahead of the provincial pace and at the moment of writing there is every indication that the rate of increase has accelerated. The actual figures are as follows :

Census	1881	1891	1901	1911	1921	1931	1881-1931
Population.							
Amritsar tahsil	430413	462734	488383	425304	450760	594410	+ 38·1
Tarn Taran tahsil	261676	305127	325576	271970	294465	322256	+ 23 2
Ajnala tahsil	201172	224836	209869	183454	184149	200454	—·4
District	893266	992697	1023823	880728	929374	1117120	
Percentage of variation.		+ 11·1	+ 3·1	—14	+ 5·5	+ 20·2	+ 25

Plague and malaria ravaged the population between 1901 and 1911, and epidemics of plague and influenza impeded the natural increase in the following decade.

Of this population of 1,117,000 (in round figures), 989,000 are natives of the district, 101,000 are Punjabis of other districts, 26,000 come from States or other provinces and 1,000 from foreign countries. On the other hand about 110,000 persons born in Amritsar were enumerated in the colony districts at the last census. This figure of course represents only emigrants of the first generation for any children born in the district of adoption are counted as natives of that district.

3. While the population as a whole has increased by 20·2 per cent in the last decade the increase is not uniform in all age-periods. The increase is nearest normal among people in the first ten years of life at 22·8 per cent, is 29·8 among people between fifteen and forty. Among people between the ages of forty and sixty the increase is only 10·4 per cent and the population over the age of sixty has declined by 7·9 per cent. There are 73 children under ten years and 14 persons over sixty to every hundred people between the ages of fifteen and forty. The following table shows the actual distribution by age of every thousand people.

Years	0—5	5—10	10—15	15—20	20—40	40—60	over 60
Both sexes	153	131	121	93	297	149	56
Males	141	127	122	96	306	151	57
Females	169	135	120	90	285	146	55

In every hundred females of all ages there are 32 married females between the ages of fifteen and forty.

In the province as a whole there are 831 females to every thousand males. In Amritsar district there are 799 (750 among natives of the district). The proportion is 756 in the Amritsar tahsil, and 851 in each of the other two tahsils.

4. The birth rate has varied during the decade ending in 1931 from 52·3 to 40·9 per thousand with an average of 47·7 (25 males and 22·7 females). This compares favourably with the provincial average of 42·3 for the same period and the district average at last settlement of 43·2. The death rate for the decade was 33·8 (17·7 males and 16·1 females) per thousand which compares unfavourably with the provincial average of 30. But at last settlement the district figures were relatively worse-55 per thousand with a provincial average of 43·6 Females have consistently fared worse than males but they have at least shown a steady improvement.

Details of the mortal effects of particular diseases and of afflicted persons will be found in the statistical tables in part B. Sixty per cent of all deaths are ascribed to fevers which cover a multitude of ills. Blindness is still the most common infirmity, 75 per cent of the infirm population being so afflicted. This is a very slight improvement on last settlement, but the prevalence of affections of the eye not actually involving blindness is distressing.

5. Infant mortality amongst Hindus, Sikhs and Muslims of all tribes is still very high. This mortality is due to unhygienic conditions. The tendency to neglect female children is disappearing. The prejudice against medical attention in cases of small-pox, *khasra*, and *torki* still prevails notwithstanding the provision made by the municipality for the prevention and cure of such diseases by establishing an infectious diseases hospital. The custom of keeping the women in an ill-ventilated dark room of the house at the time of child birth is fast disappearing. Many of the women now take advantage of the maternity hospitals opened in the city. The superstition that some member of the family must always remain with the mother of a child for thirteen days after its birth still persists. It is considered unlucky for a pregnant woman to visit other pregnant women near the time of delivery, but in the city where antenatal care is available this prejudice is dying. No child who is wearing a

* Infant mortality and birth customs.

charm (tavis) is allowed to enter the room where a new-born child is lying. The new-born child is seldom removed from the room except in the evening.

6. Of the district population (1,117,120) 560,637 are unmarried, 451,555 married and 104,928 widowed. Of the unmarried 437,231 are below the age of fifteen and 111,355 between the ages of fifteen and forty. Civil Condition. 265,366 of the Muslim population of 524,676 are unmarried; 196,138 out of 399,951 Sikhs and 89,289 out of 174,392 Hindus.

7. There are no marriage customs peculiar to the district. The age at which children are married depends much on the circumstances and the standard of education of the parents, but it is usually between the ages of fourteen and twenty among the agricultural classes. The practice of taking money, or valuables, in exchange for an eligible marriageable girl has ceased to be common, on account of public reprobation and economic depression. Large sums are spent on marriages by the Jats and Rajputs and are a frequent cause of debt. A man will mortgage half his holding rather than allow his son to pass the age at which he should be married. Marriage customs. The bargain of betrothal is always concluded through a go-between, usually the village barber, and is the real contract of marriage. The actual ceremony follows three or four years later.

Among the Hindus marriage is regarded as a sacred religious duty and therefore a special importance is attached to it. Marriage customs have undergone hardly any change since the last edition of the Gazetteer. (i) Hindus

There are the following stages :—

- (i) the betrothal or the engagement ceremony, which takes place generally through the priest and the barber, both of whom are important figures on such occasions ;
- (ii) the submission of the *saha chiththi*, the letter informing the bridegroom's parents of the auspicious date fixed for the marriage ;

- (iii) the *barat* or marriage procession, which is given a cordial reception by the bride's party at her residence and entertained hospitably according to their means ;
- (iv) the *lagan* or going round the sacred fire several times while holy *mantras* are chanted by Brahmins. This is the most essential and an indispensable ceremony, which makes the marriage bonds permanent and indissoluble ;
- (v) the *milni* which comes either before or after the *lagan* according to the traditional custom observed by the families concerned. On this occasion ornaments, cash and other presents of the kind are offered by the bride's parents to the bridegroom and his parents and relatives ; and
- (vi) the *doli*, the sending away of the bride to the bridegroom's house along with the dowry.

Some picturesque detail is added by the following account taken from an old edition of the abstract of customary law. "Some two or three months before the marriage, the girl's father sends for the horoscope of the boy and with its assistance a lucky date and moment for the marriage is decided by the pandit. Information of this lucky date and moment is then sent to the boy's parents and both sides begin to make preparations. Then between eleven and twenty one days before the date thus fixed, a Brahman is sent to the boy's parents. He takes with him a letter, called *saha chiththi*, and a set of clothes (*tewar*) as well as some ornaments. The date is again mentioned in this letter. On the arrival of the Brahman the boy's father gathers together his brotherhood. A square is traced with flour on the ground by a Brahman. On this square a stool is placed on which the boy is seated, texts being recited by Brahmans. The letter and other things received from the girl's house are put into the boy's lap. The letter is then opened and read in the presence of the Assembly. Between three and seven days before the date the ceremony of *tel charhawa* is performed. This consists of the boy and girl being bathed in the presence of the females

of their brotherhood, who rub oil on the child's head. This ceremony is performed in the villages of the boy and the girl, but if a river lies between it is not celebrated in the case of the boy till after the river is crossed. On the date fixed for the marriage, or earlier if required by the distance between the villages of the boy and the girl, the boy's father forms a procession (*barat*) and starts with it towards the girl's village. The distinctive mark of the boy on this occasion is the *sehra* or flower garland round his forehead. As soon as the girl's relations see the procession arriving, some of them are sent out to meet the marriage party and to take it to the halting place already fixed upon. In the evening the ceremony of *milni* is performed. Male relatives of both sides meet outside the village and representatives from each side embrace each other. A dinner is given to the marriage party and the boy is taken to the house of the girl's father. The marriage then takes place and ceremony called *phera* or circumambulation, if the sacred fire is completed. This is the most essential ceremony and it is this that makes marriage union indissoluble. For this purpose a canopy supported on four sticks is erected in the courtyard of the house of the girl's father. Under this canopy the boy and the girl are seated each on a *khara* (basket with bottom upwards). On the ground between the two *kharas* sand is spread and on this wood of the *dhak* or *ber* tree is piled as fuel and lighted. One corner of the outer cloth of the boy is then tied to that of the girl and they are made to walk round the fire four times, the boy leading on three occasions and being led by the girl on the fourth. During all this while mantras are recited by the Brahmans, but the married pair are silent. After the *phera* ceremony is over, the bride and the bridegroom are taken inside the house where the boy is inspected by the females and jokes are exchanged. On the date fixed for the return of the marriage party which is usually the second or third day after its arrival (according to the wishes and means of the girl's father) the articles that from the dowry are gathered together and shown to the marriage party as well as to the girl's

brotherhood. On this occasion the bridegroom's father gives the *lagis* (menials, their perquisites and distributes alms. The boy is again called inside the house of the bride's father and the dowry given to him. The marriage party with the bride then returns to the bridegroom's house. *Muklawā*, or the bringing home of the bride, follows when the girl becomes adult. Cohabitation does not take place till after the *muklawā*. If both the parties are of full age, this ceremony is performed on the same occasion as the marriage itself ; otherwise it is completed during the first or third year of the marriage, but never during the second year. For this purpose a few days after her arrival at the bridegroom's house, the bride is sent back to her parents and the groom goes there for the second time to fetch her. On this occasion some more articles are presented by the girl's family. The Arya Samajists, as well as other Hindus of advanced views do not strictly observe all these ceremonies, with the exception of the circumambulation of fire, which is essential in all cases."

Early marriages are becoming a thing of the past. The Hindus have now a much fuller realisation of their duties of educating their children and equipping them to earn their livelihood before they are married. English education, modern culture, and ordered change in almost all directions (including social legislation) have produced a marked effect upon their minds with the result that early marriages have been greatly discouraged, and widows have begun to remarry in larger numbers among certain sections of the community, mostly among the Arya Samajists and the Brahm Samajists, who are the followers of Raja Ram Mohan Ray. The orthodox Hindus still adhere tenaciously to their old notions in this respect and regard widows remarriages as not only derogatory to their self-respect, but also subversive of the basic tenets of Hindu religion. The dowry system, under the tyranny of which the parents of girls are groaning, is an evil which inspite of strenuous efforts is assuming even larger proportions than two decades ago. Certain sections of the community including most of the females support the custom of demanding and fixed dowry before marriage on

the ground that as daughters are denied succession under Hindu Law they should not lose what they can get on the occasion of marriage. The custom is however generally regarded as undesirable and there is no doubt but that with intellectual advance the state of affairs will improve.

(ii) The Anand form of marriage has been observed since the earliest days of Sikhism and is mentioned in the *Rahitnama* of Bhai Daya Singh (one of the original five Sikhs.

Beloved Ones whom Guru Gobind Singh baptized with his own hands); in Rattan Singh's *Panth Prakash*, written in 1809; in *Prem Sumarag* and in *Suraj Prakash* (both written in the first half of the 19th century). It was legalised in 1909 by the Anand Marriage Act.

(a) Sikh boys and girls are married when they are grown up, and have reached maturity.

(b) The ceremony of betrothal is not essential. When it takes place it is a very simple affair. A few relations of the boy are invited by the parents of the girl, and a kirpan and some sweets are given to them for the boy. This meeting of chosen friends is held with the Holy Book in their midst.

(c) The convenience of both parties is consulted, and a day is fixed for performing the ceremony of marriage.

(d) After a prayer the bridegroom (with no particular signs on him except a garland) goes with a party of friends and relatives to the house of the bride, where a similar party is ready to receive them. The time chosen is usually in the evening. Both parties approach each other from opposite directions, singing hymns of welcome and joy. When they are face to face, someone of them steps forward and offers prayer. Then they embrace each other and separate.

In the morning a congregation is formed with the Holy Book in their midst. Both parties sit together and listen to the music of *Asa-di-Var*. When the music is over, the bride and the bridegroom are seated facing the Book, the bride being on the left of the bridegroom. Anybody in the congregation can perform the marriage ceremony. The officiating person

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asks the couple and their parents to stand up, and, leading them in prayer, asks God's ble sing upon the occasion. Then he addresses the couple individually, pointing out to them their duties towards each other, toward their families, their society and their religion. The ideal placed before them is that they should become one in spirit :

"They are not wife and husband who only sit together;

Rather are they wife and husband who have one spirit in two bodies."

They are asked to mould their conjugal relations on the model laid down in the Epithalamium of Guru Ram Dass, which is a part of the marriage service. In it the Guru mentions four steps in the development of a life of love: Fear, Love, Restraint and Harmony.

When the parties bow their heads in acknowledgment, the scarf of the bridegroom is given into the hand of the bride, and they stand up and listen to the strains of music :

"I attach myself to thee.

Leaving all my relations as bitter, bitter,

I come to cling to thee"

Then one by one the four stanzas of Guru Ramdas's Epithalamium, called Lavan, are read out of the Holy Book, and after each reading the couple go round the Book, the bridegroom leading the bride, accompanied by the music of the same stanza sung by the musicians. Each time they return to their places and bow their heads. Then the musicians sing the six stanzas of the Anand, and the persons who is performing the marriage offers prayers of thanksgiving in which the whole congregation joins. After that *Karah Parwad* is distributed and the ceremony comes to an end with the arlanding of the couple.

(e) The same ceremony is performed at the marriage of a widow or widower.

(f) Both parties in marriage are expected to be baptized.

(g) Polygamy is discouraged, and Sikhs are enjoined to be faithful to one wife.

(iii) Among Muslims marriage generally takes place at a later age than among Hindus when the bridegroom and the bride have attained the age of puberty. It is performed by the *nikah* ceremony and takes the form of a civil contract in which the parties undertake to fulfil their respective parts. At the time of *nikah*, the *mehr* or dower which the bridegroom has to pay to the bride is fixed. Sometimes the marriage is performed through accredited agents specially authorised to act on behalf of an absent party. In the case of minors their legal guardians act for them. Marriage is not contracted with a woman who according to Mohammadan personal law falls within the prohibited degrees. After the ceremony of marriage the bride is sent in a procession to the house of the bridegroom. Next day he gives a feast to the relatives and friends and also entertains the poor. This feast is called *walima*.

8. 98 per cent of the population regard Punjabi as their mother tongue. The dialect varies from district to district, and it is possible, after some acquaintance with the accent of the Amritsar jat, to tell that a man comes from the Rechna Doab across the Ravi, or from the Bist Doab on the other side of the Beas. But the Punjabi of the Manjha is said to be as pure as any Punjabi spoke in the province. The purest dialect in the district is spoken by the Sikh Jats of Tarn Taran. The Muhammadans, though speaking Punjabi, are more given to intersperse Persian words picked up from the educated classes, and all races have begun to adopt as part of their own language the English and Hindustani words, which they hear about the courts, and which are in constant use in judicial and revenue procedure. Punjabi is also the language of the people of Amritsar city, though, of course, what they speak is not so pure as what is heard among the Jats. For more detailed information the census reports should be consulted.

9. Table no. 15 in Volume B gives the figures for the principal castes and tribes of the district with details of sex and religion. It would be out of place here to attempt a minute historical account of each tribe. Many of them are found all over the Punjab, and their representatives in Amritsar are distinguished by no local peculiarities. It will suffice to give a brief account of the chief land holding tribes, of whom the following are in Amritsar notified as Agricultural Tribes within the meaning of the Punjab Alienation of Land Act:- Arain, Awan, Dogar, Gujjar, Jat, Kamboh, Lobana, Mallah, Moghal, Pathan, Quraishi, Rajput, Sayad.

Tribes and
castes.

Much of what follows is reproduced from a fifty-year old account with modern additions to the narrative and revised statistics.

The most important of these is the Jat, but this is a very wide term and includes classes between which there is often a strong contrast. The commonest is the Sikh Jat but Muslim Jats are also a strong element in the community. A Sikh Jat will not ordinarily speak of the Muhammadan Jats of a neighbouring village as Jats. If asked, he will describe himself as a "Zamindar" by which he means a Sikh Jat, but he will describe his Muhammadan Jat neighbour as a "Musliman", even though he may be himself a Jat of the same *got* as the Muhammadan. Not that he denies the title of the latter to be a Jat, but in common speech he restricts the term Jat to cultivators following the Sikh faith. The total number of Jats returned at the Census of 1931 was 248214. This is 22.2 per cent of the total population, and 30 per cent of the rural population. Their importance is better appreciated from agricultural statistics. In the settlement just concluded, of 161,707 landowners in rural Amritsar 98,369 were Sikh Jats and 14,865 Muslim Jats. The stronghold of the Sikh Jats is that part of the district which is known as the Manjha. This is a term which is sometimes loosely used to denote the whole of the upper part of the Bari Doab, as distinguished from the Malwa, the country lying south of the Sutlej, and including

The Jats.

most of Ludhiana, Patiala, Ferozepore and part of Jullundur. But a Sikh Jat of Amritsar in speaking of the Manjha refers more particularly to that part of the Tarn Taran tahsil which lies below the old road from Atari to Goindwal and to the Kasur and part of the Chunian tahsils of Lahore. Ajnala is not counted as in the Manjha, nor, properly speaking, is the Amritsar tahsil. Now that the old *badshahi* road has been superseded by the Grand Trunk Road, the limits of the Manjha have, in common speech, been extended, and the whole of that part of the Amritsar district which lies on the right of a traveller going towards Jullundur on the Grand Trunk Road, is spoken of as the Manjha. Jullundur and Kapurthala are spoken of as the Doaba; anything beyond that is vaguely termed the Malwa; the Sialkot district is "*darya par*" or "*Ravi par*"; and different parts of the Amritsar tahsil are referred to by mentioning the name of some central village, such as "*Majitha ki taraf*" or "*Mahla ki taraf*". The Gurdaspur district, through in the upper part of the Bari Doab, is never held to be part of the Manjha. In short the Sikh Jat of Amritsar, in speaking of the Manjha, may be understood to exclude the Bangar of Amritsar tahsil, the Jandiala sandridge, the *nahri* country round Amritsar (where Kambohs and miscellaneous tribes become most numerous), and the Ajnala tahsil where there is a strong admixture of Muhammadans (Arains, Jats and Rajputs), who are so numerous in the riverain tract. The Sikh Jats, of whom the Manjha Sikhs are the pick, are the finest of the Amritsar peasantry. In physique they are inferior to no race of peasants in the province, and among them are men who in any country in the world would be deemed fine specimens of the human race. The Sikh Jat is generally tall and muscular, with well shaped limbs, erect carriage, and strongly marked and handsome features. They are frugal and industrious; though not intellectual, they have considerable shrewdness in the ordinary affairs of life, and are outspoken and possessed of unusual independence of character. They are certainly litigious, their natural stubbornness leading them to persevere in a case long after all chance of success is gone; but

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at the same time they are perhaps as honest and simple a race as is to be found in India, for the falsespeaking, common in the law courts, is conventional, and hardly indicative of moral depravity. They make admirable soldiers, when well led, inferior to no Indian troops, with more dogged courage than dash, steady in the field, and trustworthy in difficult circumstances. In private life they are not remarkable for chastity, and they are largely addicted to the use of intoxicating drugs or spirits. The women are inferior in physique to the men and age sooner, probably from the effects of early marriages, and are not remarkable for beauty. But they have the same industrious habits as the men and make excellent housewives, frugal and careful in management; and exercise a very considerable amount of influence in the family. That the basic characteristics of the race have not changed, is evident from Mr. MacFarquhar's sketch in his assessment reports: "Shrewd and assertive, yet ignorant and easily led, every enterprise finds in him a potential recruit. At his best abroad, he is a dullard at home. His lusty brutality sees nothing attractive in spending its energy on improved farming and reacts from the monotony of the rural round in individual violence or as the instrument of mass agitation *morcha* and murder are endemic in the Manjha. But the turbulent qualities for which the village offers no safety-valve, serve very well under discipline in other spheres. As a fine soldier and a successful pioneer the Jat is widely known. And in the evening of life he returns home from America, from Australia, from the Far East or from the army, to exercise his pitiless commercial instincts and invest his earnings for further profit at the expense of his untravelled brothers. The Muslim Jat is a mellow character with no outstanding assets." (In Amritsar *tahsil* the Sikh Jat "is a more sensible and solid fellow than his cousin the Tarn Taran Manjha. His mind is more his own and less the property of every agitator. He is readier to direct his energies into profitable channels and has made a considerable success of commercial enterprises far beyond the borders of the district."

A list of the different sub-divisions of Jats and their distribution by tahsils, will be found in Table 1st.

(a) The Sindhu Jats are the strongest clan in the district. They are found in detached villages in all three tahsils, but muster especially strong in the south-east corner of The Sindhus. Tarn Tarau. The central village of this group is Sirhali Kalan, and from this they have founded and peopled the ring of villages which lie round it. Here they hold thirty-two villages. This part of the tahsil was formerly known as the Khara Manjha, a bleak treeless tract with deep brackish wells, a soil sometimes poor and sandy, but generally hard and unpromising, and an uncertain rainfall. Canal irrigation has now changed the appearance of the country and the system of cultivation to some extent, but still the soil yields a small return, and holdings being small, the Sindhus have always taken eagerly to military service. Hardly a family but has one or more members in the army, the Burma Military Police or in service in Hong-Kong or the Straits Settlements. Military service is traditional among the Sindhus, and from this tribe the Sikhs drew many of their best men. They are the best specimens of the Manjha Jat which the district can show. Men on service find it easy to dispose of their land by mortgage during their absence. It is easily redeemed out of savings on their return, and in every village there are pensioners who are only too ready to take it up, and advance money on it. The clan is found in some strength in the neighbouring corner of the Kasur tahsil, and also across the Sutlej in Ferozepore, but there is no other collection of of Sindhu villages Amritsar. The Sindhu of the Sirhali *ilaga* have an ancient feud with the Pannuns of Naushahra and Chaudhriwala, which is said to have arisen out of a murder by a Sirhali man of a Pannun connection by marriage. The two clans are now good enough friends, but still intermarriages never take place between the Pennuns of these two villages and the Sindhus of the Sirhali neighbourhood. Neither clan will give or take a bride from the other. There is no well known family belonging to this clan. The

Sindhus are independent and not much given to abide by the law, and their headmen have little authority. Muhammadan Sindhus are very rare.

(b) The next strongest clan is that of the Gils. They are known as excellent and hardworking cultivators. They hold about twenty-five villages in whole or part in Tarn Taran, but they are scattered all through the tahsil. They muster strongest in the Amritsar tahsil near Majitha, and it is to this clan that the Majitha Sardars, the descendants of Sardar Desa Singh, and the Hon'ble S. Buta Singh, member Council of State, of Naushahra belong. Nag and Majitha and Sohian Kalan (part) in the Amritsar tahsil and Dhotian in Tarn Taran are the largest settlements of this clan. The Gils of Nag are Muhammadans, but are excellent cultivators, and get all they can out of their land, while those of Dhotian (who are Sikhs) are remarkably fine specimens of the Manjha Jat, and are often found taking service.

(c) The Dhillons are found most in the Manjha, in fact along with the Sindhus, the Gils, Pannuns, Aulakhs and Sidhus, they take up nearly the whole of the Manjha proper. But the Dhillons lie further up the Tarn Taran tahsil, in the upper half of it, the country in which the Bhangi *mis*i was once supreme. They hold twenty-eight whole villages and parts of others, and many of their villages are among the largest in the tahsil, such as Kairon, Padri, Gaggobua, Panjwar, Chabal, Dhand, Kasel, Gandiwind, Sarai Amanat Khan and Leian. All these are typical Manjha villages, and supply many recruits to the army, especially Dhand and Kairon. In the other tahsils the clan is more scattered, but they are fairly strong in the Amritsar Bangar, and across the Beas in Kapurthala. The Amritsar Dhillons say they came originally from the Manjha, but this is doubtful. They intermarry with all *gots* except with the Bals. The story is that a family bard, or *mirasi*, from a Dhillon village was refused help, when in difficulties in the Bal country, and in revenge cursed the whole Bal clan. Mirasis were in those days more of

a power than they are now, and the Dhillon clan took up the feud, which survives to this day in the refusal to intermarry. The Dhillons of Amritsar, who live alongside the Bals of the Sathiala *ilaqa*, do not carry the feud further than this, but those of the Manjha will not eat or drink in a Bal village, or from the same dish as a Bal. Mirasis of course keep up the feud, too. Among the Dhillons the Panjwar sardars are outstanding.

(d) Randhawas come next. They are hardly met with in Tarn Taran, but are very strong all along the Batala border, and down the sandridge in the Amritsar tahsil, especially near Mehta and as far as Kathunangal. The Randhawas. They are the strongest *got* in the Amritsar tahsil and hold thirty-nine villages. Many of them are Muhammadans, and until lately very many of them were Sultanis, but these are now fewer than they were. They rank high as cultivators, and cane-growing is a speciality in their country. Several leading men in the time of the Sikhs belonged to this *got*.

(e) The Aulakh Jats are most numerous in the Ajnala tahsil, but there is also a cluster of nine villages round Shabazpur in Tarn Taran, held by this clan. The Aulakhs. Though quite a small village, Shabazpur is well known, and the corner of the Manjha in which it lies takes its name from the village and is generally known as "*shabazpur ki taraf*". But it is round Kohala in Ajnala that the Aulakhs are met with in strength and their chief villages are Kohala, Kohali, Lopoki, Chawinda Khurd and Kalan, Madoki, Barar and Chogawan. Their leading men are not above the yeoman class, but at one time furnished three of the zaildars of that part of the tahsil—Massa Singh, Darab Khan and Bela Singh. The larger portion of their country is profusely irrigated by the Upper Bari Doab Canal, and they are a prosperous and well-to-do clan, though with small holdings.

(f) The Chahils own sixteen villages near Sheron Bagha in Amritsar. The best known member of the tribe was the late Sardar Babadur Arjan Singh, C.I.E., who held a jagir worth Rs. 2,800 per annum, 2,500 kanals of land in Tarn Taran tahsil, and 10 squares in the Lyallpur district. He was an Honorary Magistrate and Civil Judge of the First Class, an Assistant Collector and Sub-Registrar, President of the Local Board of Tarn Taran, a Fellow of the Punjab University, a Member of the Council of the Aitchison College and a Provincial Darbari.

(g) The Sidhus hold, round Atari and Bhakna, fourteen villages in all. The Atari family belong to this clan, and a notice of the family will be found further on. They have few representatives in other parts of the districts, their country being mostly in the Ferozepore district, where they hold the entire south and west of Moga, the Mahraj villages, the greater part of southern Muktsar and numerous villages in the sandy tracts of the Ferozepore and Zira tahsils. They trace their descent from Raja Jaisal, a Manj Rajput, from one of whose descendants, Barar, have sprung the ruling families of Patiala, Nabha and Jind. Other details of the Sidhu clan, also known as the Barars in Ferozepore, will be found in the Gazetteer of the Ferozepore district, where the clan is of the first importance. The Sidhus of Amritsar are almost entirely Sikhs and live in the Tarn Taran tahsil.

(h) The Bal Jats hold the large villages of Bal Khurd and Kalan near the city, besides Sathiala, Butala, Jodhe and Bal Serai, in the Bangar of Amritsar, and twenty-three villages in all. The Pannun Jats, who have spread from the Doaba, own seven large estates in the Manjha, including Naushahra and Chaudriwala. The principal village of the China Jats is Har Seh China, near Raja Sansi, in Ajnala. The Sadal Jats all inhabit the Amritsar Tahsil. The Bhullars are a fairly numerous clan and with the Mans and part of the Hers, have the honour of being known as *asli* or original Jats, all others having enrolled themselves in the great tribe

of Jats at a later date. No satisfactory explanation is forthcoming as to why all the Hers are not ranked as originals, nor is it clear whether any particular village or family belongs to the original clan or not. The Bhangus hold the large villages of Khiala (Khurd and Kalan) in Ajnala tahsil. They and the Sohals, inhabiting the village of that name in Tarn Taran, enjoy the reputation of being among the most lawless in the district. The Kangs hold a compact cluster of villages near Tarn Taran, chief among which are Kang, Kalla and Mal Chak. The Jhawara Jats of Mattewal and the neighbourhood and the Mahil Jats of Ajnala are not now classed separately in the census returns.

The land-owing Rajputs of the district are all Muhammadans. No village is owned by any clan calling themselves Rajputs and professing the Hindu religion. The chief clans are Bhatti, Chauhan, Naru, and Manj. There are 2,609 Rajput landowners in the district. Many Mahammadans call themselves Rajputs, who by birth have no claim to the name. This is probably the case mostly with the Rajput residents in the city, who number about 5,000, but these are not landowners, being for the most part labourers, or following miscellaneous occupations. Among the land-owning classes Rajputs are found most in Ajnala along the river bank. From Dial Rajputan and Inayatpur, as far as Fatta near Bhindi Aulakh, the proprietors are almost all Rajputs, and throughout the tahsil they hold about 10 per cent of the cultivated area. They have all the faults commonly found among Muhammadan Rajputs, of which pride and indolence are the chief. They take a low rank as cultivators, and are much given to employing Amins and other industrious classes to cultivate their land, with the result that many of the latter have acquired occupancy rights in Rajput villages. They are not, as a rule, prosperous, at least in Ajnala, and are often deeply in debt, but it is nearly always observable that one or two leading men, in each village, are distinctly well-to-do, and make an income by lending money to their brethren. In Amritsar they are better off and have larger holdings. Their

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[SECTION C.]

chief villages in that tahsil are Bhorchi, Fatehpur, Malowal, Khabba, Sadhar, Ajaibwali, and Ibban, and in Tarn Taran, Palasaur, Bharowal, Dial, and Bhaini. Traces of the former supremacy of Rajputs are to be seen in the cases where they enjoy a *talukdari* allowance exacted by them in their capacity as superior owners from neighbouring communities of Jats or Kambohs who were originally settled by the Rajputs as tenants, but who have come to be recognized as having almost full rights of ownership.

The Kambohs take quite the first rank as cultivators in the district. Their industry is proverbial, and they seem to get more out of the land than even the Jats. They are found principally to right and left of the Grand Trunk Road, on either side of Jandiala, their best villages being Bahoru, Nizampur, Nawapind, Taragarh, Thotian and Jahangir. The Muhammadans among them are hardly distinguishable from Arains, and the Sikhs are in every way similar to the Jats. They take the *pahal* and reverence the same Gurus, and observe the same customs. In appearance they are usually shorter and more thick-set than Jats, with less pronounced features, and altogether show less breeding. They have their *got's* just as the Jats have (the chief are Marok, Josan, and Jani) and marriage within the *got* is forbidden. But they never marry outside the tribe, with Jats or other Sikhs, and even with the Sainis of the Doaba they have no connection. It is probably only within the last hundred years that they have come to be recognized as owners of land in Amritsar, and that in former times the highest status they could aspire to was that of tenants with some right of occupancy in the land on which they had been settled, and had broken up. There are numbers of them in the city, where they excel as market gardeners, but the city Kambohs are often in debt and are not so prosperous as those living in the villages. Like Arains they are easily induced to leave home by the hope of extra profit as cultivators in canal-irrigated tracts, and they have been found most ready to go as settlers to the waste lands on the Chenab Canal, where they have kept up their reputation as

cultivators. At home they are generally found cultivating as tenants in several villages round their own, and, having little land of their own, and being given to multiplying fast, they are willing to pay a high rent. As peasant farmers they are unsurpassed, being careful of their land and their cattle, and never sparing of themselves. However, beyond this they seldom rise. Their wits are thick and education among them is rare, but, when enlisted, they make good soldiers.

Arains have many of the good qualities of the Kambohs, being industrious and frugal, but with less enterprise. In every Arain village there are many names still borne on the record, though the owners have for many years been absentees. They show best as cultivators of irrigated, and especially *chahi* lands, their style of cultivation being on a small scale. Each Arain is eager to leave his holding separated off and in his own management, and when he has got this done, he divides off his fields into small compartments, in which with the most careful industry he will cultivate vegetable and other produce needing constant hand labour and watching, such as no other tribe will take the trouble to perform. Everything with the Arain is on a small niggling scale, and he is apparently devoid of ambition. Their expenses are usually small, and they have few luxuries, yet they are almost all more or less in debt, though rarely deeply involved. Military service is practically closed to them and they are seldom educated. Not one in a hundred of the Arains in Amritsar is literate. They are content to do as their fathers did before them and do not care to rise. They are found all over the district, sometimes as owners, often as occupancy tenants, and frequently as tenants-at-will paying high rents. Bakkh, Kanala and Gujarpur are the best known Arain villages in the district; Kadirabad, Buthangarh, and Daud in Amritsar. The Kaurabeh Arains were once of some position, and one family held a jagir, but they are now of little importance. Round the city they are especially numerous, being attracted by the market for fruits and vegetables there; they not unfrequently come to grief by engaging to pay higher rents than

they can afford. But it is in Ajnala that they are most found. In Raja Sansi and Chamiani, under the Sardars, and in Ramdas, on the Mahant's land, they figure largely as tenants with or without a right of occupancy, and there is quite a colony of them in the Sailab circle below Bhindi Saiadan. Much of the rich market garden cultivation in Talla and Saurian is due to the Arain tenants, and their own villages of Chak Misri Khan, Vairoki, Mohleki, Bhilowal and Bhaggapur are models of careful farming on a large scale, and of the ordinary type.

The other tribes found owning land need but little mention. Dogars own but few villages, such as Bhalaiapur in Tarn Taran, Khankot and Talwandi in Amritsar, and a few near the Sakki in Ajnala. They are of nothing like the importance of the Dogars in the Bet of Ferozepore. Gujarars are fewer still, and those who are shown in the census returns are mostly cowkeepers and dairy men in the city. They are easily recognized by their sharp features, bare heads, long black straight hair and by the peculiar pattern of dark green checked loin cloth which they affect. Sheikhs and Saiads do not often figure as owners of land. The Saiad village of Bhindi in the Ajnala riverain is the best known. Khatri and Aroras usually appear as purchasers. The principal Khatri sections are the Bunjati, Sarin, Charzati, Jausan, Jammun, Kanne, Kapur and Malhotra. And among the Aroras the principal are Uttaradhi, Gujrati and Dakhana.

The chief tribes of village menials will be noticed in the next chapter. In speaking of the industry of the Jats and other agricultural classes, we are often apt to give small credit to the industry of the Chuhra, who are absolutely indispensable to the landowners as agricultural labourers, and who perform an immense amount of field labour for a very slender and precarious wage. The Jat and the Kamboh may be industrious in the extreme, but their industry would be of little avail in tilling the area of land at present under cultivation in the district, if it were not for the help they obtain

Miscellaneous
landowning
tribes.

Chuhra

from the Chuhra^s. On the latter falls a large share of the labour of preparing the land for the crop, and the whole work of manuring it, and much thankless labour is performed by them in irrigating it during the cold winter nights. When harvest time comes round most of the reaping and winnowing falls to the lot of the Chuhras, and this is perhaps the hardest in the whole year's round of field work. In the whole district there is one Chuhra to every two Jats, and most landowners employ one or more Chuhras as field labourers. The Jats often complain of the large amount of the grain which they have to dispense to the Chuhras and other village menials at harvest time, but are too apt to forget that it is but a small remuneration for the amount of work which menials have performed.

The Mahtams are the nearest approach to a criminal tribe in the district. They are found only along the Ravi, particularly in Bhindi Sadan and Baharwal, and
Mahtams. where there is, in any village, a large expanse of *bela* land growing reeds. They are a degraded class living on all kinds of garbage, if they can get no better food, and besides being given to thieving, are most quarrelsome neighbours. They often occupy grass huts, close to the field which they cultivate, and eke out a living by making baskets, mats and stools from reeds, and by raising and selling vegetables. They marry only within the tribe. In other districts they snare game and other animals, but in Amritsar wild animals are scarce and the Mahtams principally live by thieving and cultivation.

The Kashmiris have diminished largely in numbers since 1881. This is partly real, owing to the sickness in the city
Kashmiris. having more than decimated the Kashmiris in 1881, and partly due to the decay in the shawl-weaving trade. They are universally Muhammadans and mostly resident in Amritsar city. They are almost entirely immigrants from Kashmir, and engaged in weaving and in carpet factories. In person, the Kashmiris are slight, narrow-chested, and weak, possibly from the nature of their employ-

ment. They have sharp Jewish features, but the women when young are generally handsome.

10. This is not the place for historical accounts of the leading families of the district which may properly be sought in the new edition of "Chiefs and Families of Note in the Punjab" now (1940) in the press; but the gazetteer would not be complete without a brief reference to the living representatives of these families.

The Sindhanwalias, Sardar of Rajasansi. The Sindhanwalias traces its ancestry back to the great-grandfather of Maharaja Ranjit Singh's father and it is not surprising that this family and the Ahluwalias were recognised as the most influential and noble in the Punjab. They took their full share in the campaigns of the Sikh rulers and in the feuds of their principal supporters until peace settled on them after Shamsher Singh's loyal stand of 1848 and the annexation of the Punjab. His grandson, Honorary Lieutenant Sardar Raghubir Singh, O. B. E., is the present head of the family. His considerable local influence and his variety of associations in the district have perhaps waned with his growing industrial interests in the United Provinces; but the family's traditional place in the life of the district is being worthily maintained by his son Sardar Harinder Singh (born in 1917), who is an honorary magistrate and manages the estates. The value of the family's jagirs in Amritsar is now Rs. 37271/-.

The Sardars of Majitha. With the failure of male issue the influence of the family of Sardar Desa Singh (which produced such notable men as Sardar Lehna Singh and Sardar Dyal Singh) has dissolved in litigation, and preeminence among the Sardars of Majitha has passed to the family of Raja Surat Singh who atoned for his part in the rebellion of 1848 by his loyalty and gallantry in the Mutiny of 1857 soon after which he returned to Majitha where he enjoyed a jagir of the annual value of Rs. 4,800/-. The elder of his two sons and the present head of the family is Sardar Umrao Singh who enjoys

some reputation as a scholar and philosopher. The younger son of the Raja was Sardar Bahadur Sir Sundar Singh C. I. E., who served as Revenue Member in the reformed Punjab Government and was its Minister for Revenue from the inauguration of provincial autonomy in 1937 till his death in 1941. He had a distinguished record of public service and had also taken a practical interest in the affairs of his community as president of the Khalsa College Council and at various times of the Chief Khalsa Diwan and the Sikh Educational Conference. He was a pioneer in the sugar industry and owned a large factory in the United Provinces.

The sardars of Naushahra came to notice as collector of the Emperor's revenues. Sardar Bahadur Sir Arur Singh, K.C.I.E., was the last official Manager of the Golden Temple. On his death he was succeeded by his son the present head of the family, the Hon'ble Lieutenant Sardar Buta Singh, C. B. E., whose influence is not confined to the district. He is vice chairman of the district board, vice-president of the Amritsar Central Co-operative Bank and an honorary magistrate exercising first class powers. He has been an elected member of the Council of State since 1932. His wife is the daughter of Sir Jogindra Singh whose family is next noticed.

The leading living representatives of the family of Sardar Punjab Singh have not maintained a regular residential connection with the district but a reference may be made to the most distinguished of them Sir Jogendra Singh who is now recognised as the head of the family. He was Minister for Agriculture in the Punjab Government throughout the decade which ended with the introduction of provincial autonomy. Since his retirement from active political life he has retained his interest in public affairs and his pen has lost none of its literary vigour. He came back to the political arena in 1942 as a member of the Governor General's expanded Executive Council.

The retirement of Sardar Harnam Singh from his zaildari in 1935 emphasised the fact that while the nominal headship of the Panjwar family rested with him the lead in Public life had been taken by his cousin Sardar Sahib Hardit Singh who enjoys considerable respect and influence in the district. He sits at Panjwar as an honorary magistrate exercising first class powers and was one of the original members of the Debt Conciliation Board on which he consented to serve at the initiation of a difficult economic experiment at some loss to his private interests.

The Bhangis.

The present head of this family is Sardar Atma Singh whose public spirit can be best judged from the fact that although he is still several years short of fifty he has served as an honorary magistrate for twenty-six years. The sardar now exercises first class powers.

The Mananwala family.

The distinguished Atari family has been in eclipse for many years and the recent death of Sardar Balwant Singh opens no prospect of improvement as litigation over the succession is probable. At the time of writing the succession to the jagir has not been decided. Another famous family—that of Raja Sir Sahib Dyal—has loosened its connection with the district as the present head of the family lives in Gurdaspur district and many members are absent in various branches of service. Since the death of Rai Bahadur Misra Jowala Sabai its only prominent representative in the district is Sardar Maharaj Chand. The Hirapur family has also had its connection with the district weakened by the death of Sardar Bahadur Chain Singh for Sardar Karam Singh who is now recognised as the head of the family lives on his Outh estates. The head of Neherna family of Kalianwala is the minor Sardar Gursaran Singh whose uncle Sardar Iqbal Singh is his guardian. The Sardar of Chahal is a child. Sardar Trilochan Singh has succeeded his father as head of the Ramgarhia family and Sardar Gurdial Singh his in Aima. The most distinguished member of the Veglia family of Vachhoa is Sardar Sahib Sudarshan Singh, Indian Police.

Other families.

11. Leading citizens of Amritsar include Sardar Baldev Indar Singh (of the family of Tika Dhyani Singh of Sheikhpura)

who has been recognised as one of the hereditary sardars of the province ; Khan Bhadur Khwaja Muhammad Ghulam Sadiq a much respected gentleman who served for many years as president and later as executive officer of Amritsar municipal committee and who has been succeeded in the latter office by his son Khwaja Ahmad Gulam Sadiq ; Rai Bahadur Lala Labh Chand Mehra who with his brothers is worthily carrying on the civic traditions of their father Rai Bahadur Lala Rattan Chand, O. B. E. ; Rai Bahadur Lala Duni Chand an honorary magistrate and an important industrialist ; Rai Sahib Lala Bishan Das an honorary magistrate and sub registrar ; Rai Bahadur Lala Sain Das president of the Hindu Sabha, Sheikh Sadiq Hassan, M. L. A. head of an influential Kashmiri family and president of the Anjuman Islamia ; Sardar Sahib Sardar Santokh Singh, M. L. A., a gentleman of extensive commercial interests ; Rai Bahadur Gujjar Mal a well-known banker and philanthropist ; Rai Sahib G. R. Sethi, a journalist and notary public ; and Sardar Sahib Kartar Singh the energetic secretary of the district board who is known for his interest in co-operative banking and cattle breeding.

Outside headquarters people of distinction include Rai Sahib Vaishno Das for many years president of the town committee of Majitha ; Sardar Sahib Kapur Singh of Marhana, jagirdar and zaildar ; Sardar Sahib Dharam Singh zaildar of Usman ; Risaldar Sardar Sahib Ajit Singh lately sub-registrar of Tarn Taran ; Khan Sahib Chaudhri Shahab-ud-Din of Sherpur jagirdar and zaildar ; Sardar Sahib Chandah Singh zaildar of Ekalgadda ; Chaudhri Gulam Rasul of Fatehpur Rajputan, a member of the Debt Conciliation Board, jagirdar and zaildar Chaudhri Ali Mohammad of Ram Diwali Musalmanan, jagirdar and lately zaildar ; Chaudhri Harnam Singh of Dhianpur, jagirdar and zaildar ; and Sardar Gopal Singh of Jagdeo Khurd jagirdar.

12. Among the distinguished soldiers in the district are Lieutenant-Colonel Gurbakhsh Singh Sardar Bahadur of Tarn Tarn, Captain Thakar Singh, M. C., Bahadur, of Indian Officers. the 47th Sikhs; Honorary Captain Amar Singh Bahadur of the Central India Horse, a zaildar and member of the debt Conciliation Board; Honorary Captain Hira Singh Bahadur of the 30th Lancers; Subedar-Major Barkat Ali Khan of the 31st Punjabis, a zaildar; Risaldar Boor Singh, M. C. Bahadur of Verka, sub-registrar of Amritsar tahsil, and Risaldar Surain Singh of Chetanpura, Sub-registrar of Ajnala. Subedar Lal Chand is the honorary secretary of the District Soldiers' Board.

13. The Sikh member of the Council of State elected by the province is the Hon'ble Lieutenant Sardar Buta Singh, C.B.E., of this district. The representatives of the district in the Punjab Legislative assembly are :—

1. Mir Maqbool Mahmood of Amritsar.
(Amritsar-Mohammadan)
2. Ch Faqir Hussain Khan of Bharawal.
(Tarn Taran-Muhammadan)
3. Khan Sahib Fazal Din of Karyal.
(Ajnala-Muhammadan)
4. S. Sohan Singh Josh of Chetanpura.
(Amritsar North Sikh)
5. S. Kishan Singh son of Arjan Singh of Lahore.
(Amritsar Central Sikh)
6. S. Partap Singh of Kairon.
(Amritsar South Sikh)
7. Sh. Raghubir Kaur of Sheikbupura.
(Amritsar Sikh Women)
8. Dr. Sant Ram Seth of Amritsar.
(Amritsar City General)
9. Sh. Sadiq Hassan of Amritsar.
(Amritsar City Muhammadan)

14. Earlier in this section the number of people professing each of the three principal religions has been noticed. The following table compares the distribution of every ten thousand people by religion over a period of fifty years :

		1881	1911	1931
Muslims	...	4626	4642	4697
Sikhs	...	2422	2383	3580
Hindus	...	2939	2404	1561
Christians	...	10	54	149
Jains	...	3	16	11
Others	...	...	1	2

The last edition of the gazetter remarked on the decline among Hindus which it ascribed to more careful classification of Sikhs in the census of 1911 or possibly to accentuation of the cleavage between Sikhs and Hindus. The continuation of this decline at an accelerated pace is the chief feature of the last twenty years. An increasing consciousness among the Sikhs of their separate existence has doubtless as in all communities been fostered by awareness of the political privileges which the numbering of heads has begun to carry. Christians continue to increase more rapidly than any other section of the populace : in these last twenty years their numbers have grown from 4763 to 16,619.

15. (a) Amritsar is in the Anglican Diocese of Lahore and St. Paul's Church in the Civil Lines is maintained by the Government of India. Amritsar is now an out-station of Lahore Cantonment and the Chaplain visits once a month or more often if necessary.

Christianity :
ecclesiastical
administration
and missions.

The principal mission is that conducted jointly by the Church Missionary Society and the Church of England Zenana Missionary Society. The Amritsar Mission dates back to 1852.

AMRITSAR DISTRICT]

[SECTION C.

and a detailed history of the early days of the Mission is contained in a book entitled "The Mission of the C. M. S. and C. E. Z. M. S. in the Punjab" by Robert Clark. By 1854 a branch of the Mission had been established in Jandiala, and educational work of different kinds started in the city of Amritsar. The work spread outwards to centres such as Majitha, Tarn Tarn, Ajnala and Asrapur. Up to 1919 education work had been represented in Amritsar itself by the Boy's High School, a Girls' Middle School on the Jullundur Road, and the Alexandra High School. This latter had been founded in 1878 for Indian Christian girls of the better class, but since 1907 has admitted children of other communities as day scholars. To this School belongs the honour of having passed the first female candidates in the province in the matriculation examination and in the Junior Anglo-vernacular teachers' examination. In addition there were a boys' high school at Majitha, and various primary schools both for boys and girls in the city and district. During this period medical work was carried on in hospitals for both men and women in Amritsar city, and in a number of branch dispensaries in the district.

The troubles of 1919 led to a considerable reorganisation of the work, by the amalgamation of certain branches and the closing of others. Education to-day is represented by the Alexandra High School, Amritsar, which is now a school with approximately 360 pupils. This increase is due to the amalgamation of the old Middle School with the Alexandra, which has two boarding hostels capable of accommodating 180 boarders. New buildings, including a chapel and a swimming bath, have been added to the old schools, and girls of all communities are now admitted both as boarders and day scholars. For boys there is the High School at Majitha, and the C. E. Z. M. S. runs a simple boarding school up to primary standard for village girls at Tarn Taran and day schools for girls at Jandiala and Asrapur.

With the growth of more governmental and municipal facilities for medical help, the men's medical mission has been

closed down, but there has been a large growth of medical work among women. For this St. Catherine's Hospital supported by the C. E. Z. M. S., acts as a base. The hospital is within Amritsar city, near the Mahan Sing Gate. It is now 100 beds and maternity wards and an operating theatre. It is an important training school for Indian nurses and dais, and has two English doctors and three English sisters in residence. It maintains close links with a series of outstation hospitals and dispensaries at Tarn Taran, Asrapur, Ajnala, Majitha and Jandiala. The following statistics for these hospitals for 1938 are of interest :

		St. Catherine's.	Tam Taran.	Asrapur.	Majitha.	Jandiala.	
No. of beds	...	100	30	32	..	10	
In-patients	...	1,400	304	750	..	140	
Operations	...	626	71	113	...	62	
Maternity cases	...	273	45	1 183	20	13	
Out-patients	{ new cases	...	8293	4626	4,850	780	4,014
	{ return visits	...	19033	18629	13,135	3122	13,059
Visits to patients houses	...	320	25	691	17	40	

At Tarn Taran the Mission to Lepers, in conjunction with the C. M. S., runs the largest leper home and hospital in the Punjab, with 131 men and 89 women inmates. Attached to the asylum is a flourishing home school for untainted children. This whole work is in the able hands of the Rev. Dr. A. P. and Mrs. Das and their family.

Amritsar is the headquarters of the Assistant Bishop of Lahore, and the work in the Amritsar district is his special care. The main emphasis of the Mission work in recent years has been on the building up of the Christian church in the

AMRITSAR DISTRICT]

[SECTION C.

villages. This work is now more and more in the hands of the Indian clergy and their assistant lay workers. Efforts are being made to build simple village churches in every centre with a considerable Christian congregation.

The Revd. Fr. Michael Angelo, who later became Bishop and Vicar Apostolic of Hindustan, was the first Catholic priest to reside at Amritsar in the Cantonment. This (b) Roman Catholicism. was in 1860. The present Church, built in honour of St. Francis of Assisi, was built in 1863, and since then there has been a resident priest at Amritsar with an intermission from 1914 to 1932. At present there are three priests living at Amritsar who are Franciscan Capuchins of Belgian nationality.

As long as there was only one resident priest, the catholic activities were almost exclusively limited to the ministration to the British Troops, the railway employees and other European civilians residing at Amritsar cantonment and town. Missionary activity among the Indians of the district was systematically initiated in 1929 ; and at present the Catholic Church counts 2500 adherents living in about 80 different villages. In April, 1939 the Indian Catholics of Amritsar Town associated and founded. "The Indian Catholic Union of Amritsar Town", for the spiritual and temporal welfare of their community. Their present strength is about 70 members.

In October 1937 the religious congregation of the Sisters of Charity of Ghent (Belgium) opened a school under the patronage of the Sacred Heart to provide for the education of high class Indian girls up to the Punjab matriculation examination. There is a boarding house for little boys attached to this school. The present roll is 105 pupils. A second school and boarding house, known as St. Mary's school, was opened at the same time under the management of the same Sisters, to provide for the upper primary education of poor and orphan girls of the Catholic community, although other children are admitted to the classes as well. The roll of this school is 70 at present. Both these institutions are situated on the Majitha Road, Amritsar.

16. The classification of the population by occupation reproduced from the census returns in the B volume, is not altogether satisfactory. The only points of importance are that the principal occupation is agriculture and that the only industrial community of any importance is concentrated in the Amritsar urban area.

17. The ordinary food of the people consists of cakes of meal, made of wheat when they can afford it, maize, or mixed wheat and gram. *Bajra* is not eaten to any extent.

Food. The very poorest, especially in Ajnala, content themselves with *maddal* when they can get nothing else. These cakes are eaten with *dul*, a pottage of gram or pulse ; and *lassi*, or buttermilk, is the usual drink. Salt is always used and *mirch* (red pepper) is mixed with the *dul*. If vegetables are eaten, they are generally in the form of green rape (*sars n*), less frequently carrots, onions, or turnips, grown by Amins and sold in other villages. Buffalo's milk is preferred to cow's and rice has its place on the menu. The use of sugar in various forms and clarified butter (*ghi*) is more general than it was thirty years ago. Before starting to his work in the morning, the Jat will have a light meal to break his fast, but a more substantial meal of cakes and *lassi* is brought to him in the fields by the women or children, when the sun begins to get powerful and the oxen have their midday rest. Work is then resumed in the afternoon in winter, or about four o'clock in the summer, and the heaviest meal of the day is taken at sundown in the house when the day's work is over. Rajputs and other races, who seclude their women, cannot have their food brought to them in the fields and lose time by returning home, having already lost time in the morning by meeting for a smoke after prayer at the village gateway. With a Mohammadan the pipe is always within easy reach whatever work he is doing.

18. The dress of the Sikh cultivator is simple in the extreme. The material is almost always unbleached cotton made up by the village weaver from homegrown materials spun by the women of the family and supplied to him. The universal head covering is a *pagri*; a loose-sleeved shirt and

cloth wrapped round the loins kilt-fashion complete the ordinary dress. In place of the shirt and sometimes in addition to it, a light wrap may be worn over the shoulders which can be easily thrown off. Rough shoes of the usual pattern are worn. They last about six months. But when at work the shirt or wrap is often discarded, and it may be, the pagri as well. The loin cloth is seldom thrown off, but village menials may be seen satisfying the requirements of decency with a simple breech-clout. In winter, all but the poorest wear a heavier double-folded cotton wrap, which may be worn over the head; pyjamas or trousers are a hindrance to those who work with their own hands, and the wearing of them is usually the sign that the man is in military service or can employ others to work for him. Muhammadans affect colours more than the Hindus, especially in Ajnala. With them the loin cloth is often of a red or olive green check, the latter being a favourite colour with Gujars, the former, though the colour is one more often associated with Hindus, worn by Arains. The red pagri is sometimes worn by Sikhs particularly Kambohs, but is never worn by Muhammadans. Nor is the custom of wearing a coloured *safa* common in Amritsar. This almost invariably marks the Sikh Jat from the Malwa. Woollen clothes are not commonly worn, nor can the bulk of the people afford them. Among the Sikhs, Nihangs usually carry a brown blanket with a red striped border. Awans are often seen with a striped blanket in the winter, similar in pattern to those worn in the Upper Punjab, but these are exceptions. Otherwise only the wealthier men can afford to wear woollen clothes. In Amritsar city and the larger towns the wealthier inhabitants have adopted some portions of European attire and many more have their garments made from European cloth. In particular, European types of shoes and boots are very much in demand.

19. The dress of the women is brighter, and there is always some colour in it. A wrap is always worn over the head and it is considered indecent to appear in public without it. With this are worn a loose jacket coloured red or blue, or of some printed cotton stuff, and either an ample

pair of blue striped pyjamas, tight at the foot, or a petticoat. Sometimes the petticoat, the favourite colour for which among Sikh women is red or brick-dust, with a yellow or green border, is worn over the pyjamas, more especially in cold weather or when going from home. On the actual journey the petticoat may be hitched up or even carried over the arm. The *angi* or bodice, when worn, is affected by married women, especially Arains and Changars, but is not common. The *chadar* or head wrap may take the form of a *phulkari*, a cotton cloth of black or red ground with a flowered pattern embroidered in floss-silk. In the hot weather the wrap may be worn by older women as a covering for the head and shoulders without the red or blue jacket. In the towns the dress is far more varied, but the petticoat is more common than the pyjamas among the women of the Hindu trading classes, and purple with or without a yellow border is a favourite colour.

20. Standards of comfort among the people of the district have risen considerably during the last thirty years. Two of the

Standard
living

main reasons for this are contacts made by soldiers during the war of 1914-18 with the outside world and the very great improvements made in communication between towns and the villages owing to the popularity of travel by lorry. There are few even of the village menials now who do not possess and wear at least on festivals or similar occasions gaily coloured silks or cotton fabrics made in Japanese, European or Indian Mills. For the educated or partly educated the wearing of mill-made clothes is the general rule and there are many village women now who possess Bata's shoes. Many villagers wear coats cut in the European style-woollen for winter wear and silk or cotton for summer. Practically every household has china tea sets, enamel ware, metals trunks, cheap lamps, clocks and other ordinary articles of domestic use. Gramophones and sewing machines are fairly common in the houses of better class farmers and prosperous village artisans. The income which the villager of Amritsar, especially the Jat, obtains from extraneous sources exceeds by many times the total demands made by Government. Many hold squares in

colonies in Lyallpur, Shahpur, Montgomery and Multan districts and in Bikaner and Bahawalpur States. Large sums are remitted to the district by men who have taken service in the army and the police in Burma, the Malay States, Hong Kong and other colonies. There are traders and contractors all over India and the far East and many of the Village artisans find lucrative billets in the iron works at Jamshedpur and industrial centres in Bihar and Bengal. Their wealth would be much greater than it is if they were more thrifty, less quarrelsome, and knew how best to invest the sums at their disposal. A portion of their savings is always invested in land but a large part is squandered in drinking, litigation and marriages and other festive occasions.

21. The women, unless widowed, are usually loaded with silver ornaments, worn on the ears, neck, arms and ankles, and much of the wealth of the family is invested in

Ornaments.

them. At a marriage no bride's outfit is complete unless she is provided with the ornaments usually worn by her class. Among the men, ornaments are rare, but those who have saved money often invest it in the shape of a string of gold mohurs; worn round neck. a tighter necklace of hollow gold beads are even a pair of gold bangles being worn when it is desired to make a show. Pensioners are especially fond of displaying these and they may be noticed among the Sikh Jats of Tarn Taran, with whom service away from home is commonest.

22. The villages in the district are almost always composed of houses built of sun-dried bricks, or of large clods of caked mud taken from the bottom of a pond. But there

Dwelling.

are few villages which do not also contain one or two masonry houses, the home of a well-to-do headman, of the village money-lender, or of a pensioned officer. The houses are crowded together as closely as they can be, separated by narrow winding lanes a few feet wide. It is not always the case that there is a lane leading right through from one side to the other. Often the houses of one *patti* or subdivision lie together, having, a separate entrance with a gateway. These gateways in the best Sikh villages are commodious structures, with a roofed shed

to right and left of the entrance, the roof extending over the entrance itself, the floors of which are raised two or three feet above the level of the pathway running between. In these travellers are housed, and the owners of the *patti* meet when the day's work is done, sitting on the matting spread on the floor or on the large wooden bedstead which is often found in them. These gateways may have an ornamental front, and if in a good state of repair, they mark the well-to-do village. Between the actual buildings and the cultivated fields is an open space running right round the village, sometimes shaded by *pipal* trees and almost always filthy. Carts, which would take up too much room inside the village, stand here. On one or more sides of the village will be found ponds from which earth is excavated for repair of houses, where cattle are bathed and watered, and in which hemp stalks are soaked, and disused well and cart wheels sunk to keep the joints of the wood from shrinking. The backs of the houses are usually blank walls forming an outer wall to the village. In the space running round the village are found the manure heaps and stocks of fuel-cakes of dried cow-dung belonging to each house. The space used for storing these is as a rule, limited, and disputes as to the right to occupy a particular site for a dung heap are keenly fought out. On entering the village we find the doorways of the houses opening on the main streets, or side lanes running off them. Ordinarily the front door leads straight into an open courtyard, with troughs along one or more of its sides, at which cattle are tied. The dwelling-houses will generally be found along the side of the courtyard which fronts the doorway. These are long and narrow, with or without a small verandah in front, and are generally provided with a flight of steps or a wooden ladder giving access to the roof. Windows there are none; light and air are admitted by the door, and smoke finds its way out in the same way, or by a hole in the roof. But cooking is carried on for the most part in a partly-roofed shelter in the corner of the yard, for the people live as much as they can in the open air, and are only driven indoors by cold or rain. A noticeable object in every house is the large jar-shaped receptacle for the grain of the household made of plastered mud with a stoppered

hole, low down in the side, for the grain to run out. Each family living within the enclosure has a separate dwelling house and cooking place, while in the yard outside the doors, much of the available space is taken up by the bedsteads and waterpots of the household, and the spinning wheels of the women. The roof is used for storing heaps of fodder, and bundles of cotton twigs for roofing purposes, and for drying chillies, maize cobs and seedgrain in the sun. Occasionally there is a small upper chamber on the roof, but this is rare. Sometimes the front door instead of leading directly into the yard, leads into a porch or *deorhi* out of which again a smaller door, placed so that the interior of the yard cannot be seen into from the street, leads into the yard. The *deorhi* will only be found in the houses of well-to-do *zamindars*, or in houses which have been built outside the village in open ground for want of room within. It is not often space can be spared for it in the crowded lanes. It is used for stalling cattle, storing fodder, ploughs, yokes and other implements, or as a guest house for those who may not be admitted within. If the owner is well off, the outer gate of the *deorhi* may be set off by a cornice of carved wood or even a front of masonry. But the *deorhi* is not so common as in parts of the province where land is of less value, and where the villages are more roomily laid out. Economy of space is everything in a highly irrigated district like Amritsar, and the Sikh or Muhammadan Jat will submit to much inconvenience in the matter of house room, before he will sacrifice part of his cultivated fields to build himself a better house outside. Some build separate houses at the wells, but this is a last resource, and there is not the tendency found in other parts of the province to scatter into detached hamlets, and leave the parent site.

The advance in better and cleaner methods of living has not kept pace with the advance in standards of comfort and wealth. The ordinary village still presents the appearance of a buffalo wallow surrounded by heaps of dirt and filth, with lanes which in the rains are a quagmire of mud. Many houses now have hand-pumps the overflow of which is allowed to run into the streets and keeps them permanently in the state which

should be normal only in the rains. There are, however, a few villages where the teaching and propaganda of the health and kindred departments of Government has had some effect and in these villages a start has been made with pitting manure and rubbish and the paving and drainage of streets. There are also individuals, especially those who have been abroad, who on their return to their villages have built good *pacca* houses, well ventilated and planned. There is every hope that their good example will soon be copied by the stay-at-home zamindars. With the expenditure on better articles of dress and household furniture there is less money being wasted on jewellery. This feature is especially noticeable in the case of dowries in which the majority of articles are now presented with a view more to use than to display.

Those of the village menials whose trade or habits are unobjectionable live within the village site in smaller houses, built originally on land given them by some owner under whose protection they settled in the village. Carpenters are often better housed, usually at the outskirts of the village, and are the most comfortably off of all the village menials. But *chuhras*, *chamars*, and leather-workers have an *abadi* for themselves at the outskirts of the village, being held unclean. Instances may be met with where the owners have combined to take up cultivated land at considerable expense, and make it over to the *chuhras* in order to provide these indispensable menials with a site at a convenient distance. One of the most noticeable features of the last few decades has been the movement of the village menials from the villages to the towns. This has been especially noticeable in the Tarn Taran tahsil and the new abadis which have grown up round Tarn Tarn and Amritsar town are inhabited mostly by these *kamins*. With the political awakening among the masses the menials have discovered that they are likely to fare better in the towns than in the villages. There they can get work for cash wages and escape a lot of the drudgery and oppression they have to endure in the villages. They feel more secure and more independent masters of their own fate. Those who have remained in the villages have found their

conditions improved as their scarcity value rises and the change in their standards of comfort has in some cases been more outstanding than that of the landowners. During the depression of the early thirties the position of the *kamins* remained comparatively better than that of their masters because no change took place in their customary wages. Their children have taken more advantage of the educational facilities provided in the villages than have the children of zamindars and this is again one of the main reasons for their drift towards the towns, a drift which has been hastened by the growth of industries in and near Amritsar.

The spread of education and the raising of the standards of existing education in the villages has had the effect, though it may seem a contradiction in terms, of leaving the villages less educated than before because every child who gets as far as the eighth class considers the village is no place for him and goes off to the towns to join the rank of the white-collared workers the clerks in Government service, in banks, business houses and factories. Never again do they wish to see their village with its sordidness and heart-breaking manual labour. The better side of village life the healthy conditions under which farmers work, the wholesome food and drinks they eat, are all forgotten for the glamour of city life, even though the wages offered are small, the rents heavy the accomodation limited, the food meagre and expensive, and the standard of dress and social behavior to be lived up to high. Village life is looked back to with contempt and the resolve is taken that their children at least will never have to live the life of their forefathers. This attitude is having bad effects on both village life and the town population—the villages are losing the persons who might improve conditions of village life and the towns are gaining a population discontented and in the second generation of poor physique and health.

23. Almost every village, and, in large communities, every *patti* has its guest-house, known as a *Dharmasala* among Hindus, or as a *takia* among Muhammadans. This is in charge of a *sadhu*, or ascetic, or, with Muhammadans, of the village *kazi*, who also officiates in the mosque. *Dharamsalas* are always kept scrupulously clean, and in most of them a copy of the Granth Sahib, or sacred book, is kept. This

Public buildings

is placed at a window, whence the *sadhu* in charge reads aloud to himself, or to those who care to listen. The *Dharamsala* is a well-built structure, and is often endowed with a small piece of common land set apart for its maintenance. Muhammadan *takias* are less pretentious structures, and may be only a shed for travellers, fortunate if it has a door. Fire is kept burning for those who wish to smoke, and there may be a well. They are worth the small endowments, allowed by Government for their support, if only for the sake of preserving the shady trees which are the especial care of the man in charge. The ruined tomb or *khargah* of some bygone saint, decked with flags and with a recess for a small oil-lamp, will often be found beside it, and it is usually close to the villa or mosque. Hindu Jats who worship the saint Sarvar Sultan keep up the dome-shaped *makans* which perpetuate his memory, but these are indifferently cared for. *Shivalas* or Hindu temples are not found, save where there is a colony of Hindu traders, but *thakurdwaras* are more common. In a few villages Jogis, revered by Hindus and Muhammadans alike, have established an *asthan* or monastery.

24. The Hindus cremate their dead and send the bones to the Ganges, and throw the ashes into the nearest river or stream. The Arya Samajists are not very particular about this and throw even the bones of the dead into a neighbouring stream or tank. They also perform the funeral rites in a different way. But the number of such Hindus is very small, and a majority stick to their traditional *shastric* rites, without the performance of which, according to their belief the departed soul cannot find peace.

At the deathbed of a Sikh, the relations and friends console themselves and the departing soul by reading *Sukhmani* or the Psalm of Peace. When death occurs, no loud lamentations are allowed. Instead, Sikhs exclaim *Wahiguru, Wahiguru*, (Wonderful Lord). All dead bodies, whether those of children or of adults are cremated. Where this cremation is not possible, it is permissible to throw the dead body into the sea or river. The dead body is washed and clothed (complete with all the five symbols) before it is taken out on a bier to the cremation ground. The

AMRITSAR DISTRICT.]

[SECTION C

procession starts after a prayer and sings suitable hymns on the way. At the cremation ground the body is placed on the pyre and the nearest relations light the fire. When the fire is fully ablaze, some one reads *Sohila* and offers prayers for the benefit of the dead. Then the people come away, and leave the relations of the dead at their door, where they are thanked and dismissed. The bereaved family, for the comfort of their own souls as well as for the peace of the departed, start a reading of the Holy Book, which may be at their own house or at a neighbouring *Gurdwara*. Friends and relations take part in it, and after ten days they again come together when the reading is finished. The usual prayer is offered and *Karah Parshad* distributed. The charred bones of the dead together with the ashes are taken from the cremation ground and thrown into the nearest river. It is forbidden to erect monuments over the remains of the dead, although monuments in their honour at any other place would be quite permissible.

Muslims wash the bodies of the dead before burial. Prayers are said for the good of the departed soul. After the third or sometimes the fourth day, the rites of *kul* are performed, passages of the Koran being read and the poor fed. The ceremony of *chaliswan* takes place in a very similar way to *kul* after a period of forty days.

25. In the village polity social amenities are conspicuous by their absence. The daily life of the ordinary cultivator is rarely free from monotony and is a continuous round of labour. Canal irrigation has made some difference in this respect, enriching those who are fortunate enough to obtain it, and allowing them to employ menials as farm labourers. It has also reduced much of the work on the wells, which is monotony itself. Local initiative is wanting for making life in villages interesting and care-free. The life of the womenfolk, particularly that of the housewife, is equally monotonous and hard. She has not only to take care of the children but has to cook food, spin yarn, take care of the milch animals and to serve food at least twice a day to the male members of the family outside in the fields. In a

Amusements
and festivals

district where nearly all the available waste has been broken up, and grazing is scarce, the cattle are a constant care. Some-one member of the family must always be at home to cut the fodder, chop it, and feed it to the working catle, for it is only the milch cattle and especially the buffaloes in milk, that are looked after by the women. Of amusement they have few. There is the fair at Tarn Taran at the end of each lunar month, and the great fairs at Amritsar on the Dewali and Baisakhi holidays. After the day's work is done the younger men may be seen wrestling, competing at the long jump or with heavy wooden weights near the dharmsala or by the village gate. Marriage festivals come round, and visits of condolence have to be paid, but the breaks in the round of labour are few for the men and still fewer for the women.

The principal fairs are those held at the Baisakhi festival in April and at the Dewali in November, both at Amritsar city. They were primarily religious fairs, but gradually the meetings came to be utilised for the buying and selling of agricultural stock, and now the fairs are the best known and most largely attended in the province. On these occasions all the bungalows or hospices, originally kept up round the tank of Durbar Sahib by leading families for the accommodation of their following on the occasion of their visits, and the semi-religious akhara, or rest-houses, in the city are filled to overflowing, and representatives of every race in the Punjab and beyond its borders may be seen. Special trains for the accommodation of the visitors to the fair are run, and all the main roads leading to Amritsar city are crowded with the cattle being driven in for sale. Each fair lasts about ten days and during all that time the cattle are coming and going. Several other fairs are celebrated in the district, all of a religious character. Of the monthly lunar (*amawas*) fairs held at Tarn Taran, the one in March and the other in August are the most important and largely attended. The buying and selling of stock at these fairs has also been arranged, under the auspices of the District Board. Another religious fair is held at the Ram Tirath tank at Kalar, on the borders of the Ajnala and Amritsar tahsils, on the Gujranwala

road. This is more a Hindu than a Sikh fair, and is largely attended by Hindus from the city. Others again are held at the Baoli Sahib, or sacred well, at Goindwal in September; at the shrine of Guru Angad in Khadur Sahib, (both in Tarn Taran); and at Chheharta and Baba Bakala in Amritsar tahsil. The principal Muhammadan gathering is at Kotli Shah Habib, the shrine of a saint near Ramdas in Ajnala, but there is scarcely a single Muhammadan shrine to which the custodians do not seek to add importance, by the holding of a small local gathering for their own or the saint's profit.

The Dehat Sudhar fairs under the auspices of a mixed committee of officials and non officials are becoming an instructive and interesting feature of the district. At these fairs competitions in village games are held. The beneficent departments arrange exhibitions, which have considerable educative value. Rural uplift dramas are staged and the audience entertained by songs on subjects of rural interest. In some villages the committee has provided radio sets.

26. In Amritsar town cricket, hockey, volley-ball, tennis, badminton and football are played. Much impetus was given to these games by the institution of the Amritsar Recreation Games Association founded in 1924 by Mr. F. H. Puckle, I. C. S., the then Deputy Commissioner. It provides beautiful grounds for different games, runs tournaments and stages important matches. In 1933 it had the responsibility for the visit of the M.C.C. team and the staging of the first international cricket match at Amritsar. It built the Bhupindra Pavilion with Stadium and improved the Alexandra ground to such a pitch as to merit the remark—"One of the best cricket fields of the world"—from Mr. Jardine the captain of the M. C. C. team. The game was a unique success and left a landmark in the history of Amritsar, making it one of the centres in India for international games. In 1936 His Highness the Maharaja of Patiala's team of Australian cricketers provided another great occasion.'

Recently on account of its economy in space and cost, volley-ball has become very popular especially among the commercial class of people and one will find volley-ball nets pitched up morning and evening in different parts of the city. Periodical tournaments are held by private clubs in this game. Kabadi is very popular among the working classes and local and inter-district competitions are held in it.

The Amritsar District High Schools Tournament which is held every winter in Amritsar under the auspices of the Headmasters' Association includes competitions in different games and sports creating great interest for games among the school children.

In the district hockey, football, rugger-touch, volley-ball, tug-of war, kabadi, jumps and races are popular. The middle school tournament run in Amritsar by the district inspector of schools and other competitions held on the occasion of different festivals and fairs by bodies like the Dehat Sudhar Committee have very much advanced the cause of physical culture.

The local Boy Scouts Association has done much by disciplining the youths and creating in them the spirit of universal brotherhood, service of mankind and love for games, wood-craft and handi-crafts. First class bands are attached to scout troops which have put greater life in schools by making the massed drill lively and interesting. The physical display of the district held in the spring at headquarters shows how fit and smart the modern students are. The play-for-all movement which was introduced in schools some ten years ago brought games within the reach of all the students, contrary to the old practice of giving games to the selected few. In games, scouting, and physical training the district is one of the leading districts of the province, and in this there may be the seed of better use of the vitality of the people of the district, now so unfortunately often directed to dissipation and violent crime.

27. There are no names and titles peculiar to the district ;
 Names & Titles the ordinary Hindu and Muhammadan names in
 use are found in all the Central Districts of the
 Punjab

CHAPTER II—Economic.

SECTION A.—AGRICULTURE.

1. The district has an area of 1560 square miles distributed over 1090 estates in the three tahsils of Tarn Taran, Amritsar and Ajnala. These figures include the urban areas, but facts and figures in this section are, from this point onwards, concerned with the 1067 rural estates and exclude the 23 estates and 44 square miles in the Amritsar Urban and Suburban circles and the Tarn Taran Urban circle. The biggest tahsil is Tarn Taran (595 square miles spread over 355 estates), the smallest Ajnala (418 square miles and 347 estates). Amritsar's 365 estates cover 503 square miles.

2. Seventy-five per cent of the rural area is cultivated. The decline which set in fifty years ago has continued. Since last settlement there has been no appreciable difference in the technically cultivated area ; but if, to eliminate impermanent variations, the area of new fallow is included in cultivation a loss of seven thousand acres becomes apparent and it must also be remembered that the maintenance of the technically cultivated area is due to an accretion of nearly five thousand acres in the Sailab circle of Ajnala tahsil where an unfavourable river may wash it out in a single flood. There has however also been some attempt at reclamation of sour land in this tahsil which I estimate has brought about three thousand acres under the plough while the other two tahsils have lost nearly eight thousand acres from deterioration of the character discussed in chapter 1. Ajnala is the only tahsil where cultivation has advanced since last settlement (half of it unstable as just explained) but in that tahsil only 62 per cent of the area is cultivated and the acreage is less than it was fifty years ago. In each of the other two tahsils eightyone per cent of the area is cultivated.

3. They too are favoured by a much greater measure of artificial protection from seasonal variations of rainfall. Ajnala Irrigation. which led the district fifty years ago with 63 per cent of its cultivated area irrigated has in the succeeding half century improved this to 71 per cent only ; while Tarn Taran which was then most backward with 47 per cent of cultivation irrigated has outstripped the other tahsils and reached a point where 81 per cent of its cultivation is protected. In the same period Amritsar tahsil has advanced from 52 per cent to 75 per cent, and the district as a whole from 63 per cent to 77 per cent.

The main sources of irrigation are wells and canal. 38 per cent of the cultivated area of the district depends on wells (which do 49 per cent of all irrigation) : 46 in Amritsar, 44 in Ajnala and 26 per cent in Tarn Taran. A declining use of wells in face of the increased command of the canal was recorded at last settlement. Now with a more clamant demand for somewhat inelastic canal supplies, wells are much more used. 13,508 masonry wells are at work in the district, 1,246 are idle. The capacity of a well is twenty cultivated acres with a variation from twenty-two acres in the Tarn Taran and Amritsar tahsils to sixteen acres in the Ajnala tahsil. The depth to water is in the neighbourhood of 16 feet and the rising water-table of last settlement has fallen by a foot and a half. There are general complaints of exhaustion to which better drainage and less rain may have contributed and the use of pipes in wells to increase their capacity which was unknown at last settlement is now fairly general. These figures exclude masonry wells below the *dhava* in the Tarn Taran *bet*-33 at work and 19 idle with an average capacity of 6 acres ; and of course all manual wells, an unstable lot at present numbering 37 active which irrigate an acre apiece.

Certain parts of the district to which reference has been made in the assessment reports offer scope for a scheme of tube-wells worked by electric power and elsewhere the Sailab and Hithar circles of Ajnala for instance) it may be expedient to show greater liberality in advances for the construction of wells.

This is the more urgent as there can be little hope of increased supplies of canal water and if the demand for it is to be met in areas where well-water is brackish this, in the absence of any scheme for the conservation of summer water to augment the meagre winter supplies, can only be done by the substitution of wells for the canal where the sub-soil water is sweet. It is significant that concern for better supplies of canal water thrusts anxiety about an increase in land revenue to one side. Since last settlement the authorised full supply of perennial channels in which the district has an interest has been reduced by 7 per cent which, on an almost unchanged area proposed for irrigation, has increased the official duty of a cusec of water from 196 to 211 acres. Even less satisfactory however is the unnatural and considerable variation in the duty of water from channel in conditions of soil and supply which are very similar. The credit given to the canal in statistics for crops to which it may have made a very small contribution and which it could certainly not mature independently-where, for instance, it is desired to rest a well at a critical season or where dilution of brackish well-water is desirable, is misleading. This goes far to explain how *nahri* area is maintained in face of a reduction of supply on a particular channel. The cultivator gaily spreads canal water over an area it was never intended to irrigate.

The rather different problems which arise on *kharif* channels have been solved by decisions taken during reassessment. These channels will no longer open for a *rabi* watering either in December or March or in both months after their closure in October but will confine themselves to their primary purpose without detriment to the vested interests of irrigators on perennial channels. The change in regime which this may force on some irrigators has been recognised by very considerable reductions in the rate which *rabi* crops will pay on these channels; by acceptance of the principle that the charge will be a flat rate irrespective of the crop sown and by a suggestion of better *kharif* supplies-these (in the duty expected of water) at present compare unfavourably with country further north where the rainfall is

greater. The revenue assessment need not be disturbed on account of the changed regime.

The average annual demand on account of occupier's rates is in the neighbourhood of fifteen and a half lakhs of rupees of which Tarn Taran pays nine and Amritsar four lakhs. In Tarn Taran tahsil this demand is half as much again as the land revenue and over the district as a whole approximately equal to the expiring demand of land revenue.

Ajnala is the only tahsil dependent to any great extent on a river. *Sailab* cultivation on the Beas in Tarn Taran tahsil is only 2 per cent of the cultivated area and in Amritsar is insignificant. In Ajnala however 14 per cent of the cultivated area relies on the Ravi for moisture. The silt of this river is notoriously fertile and good *sailab* land produces very fine crops. But an overlay of sand sometimes buries the good soil. There is also a feeling of injustice abroad in the withdrawal above this district of so much Ravi water for canals feeding other districts with no compensation in the way of regular irrigation of any kind in the valley itself.

19 per cent of the cultivated area of the district, and as much as 25 per cent in the Amritsar tahsil, depends entirely on rain for its moisture. The average annual rainfall has declined from 23.14 inches at last settlement to 21.93 inches now, but the loss has been in the monsoon for the winter rains of both periods are on a par. Averages are however apt to obscure facts and it is worth notice that in Tarn Taran tahsil where alone there has been no appreciable change, the average annual rainfall for the last ten years is five inches less than it was in the first decade of the period and the loss relatively greater in the winter than in the monsoon. This tahsil also shows much the biggest range of variation with as little as ten inches and as much as 48.78 inches. The three tahsils are now much more on a par than they used to be, Tarn Taran which at last settlement returned an inch less than the other two tahsils being now slightly better than either of them with 22.09 inches. Ajnala follows with 22.02 inches while Amritsar has fallen to 21.68 inches. Of the district

average of 21·93 inches, 16·3 inches are monsoon rain and 5·63 inches winter rain. It is commonly stated that an annual fall of twenty inches of rain is enough to mature *barani* crops but the bitter complaints of rainfall short in quantity and untimely in season suggest that the Amritsar farmer either has not heard of this or is not sufficiently scientific to take advantage of it.

5. There has been no progress worth record in the sown area of the district. Amritsar tahsil shows some improvement;

Cropping Tarn Taran has been unstable: and in Ajnala there has been no advance at all and the riverain circles have been distinctly worse. But the quality of the sown area has improved, for unirrigated sowings have fallen from 40 per cent of all sowings at last settlement to 26 per cent as the new settlement average and 21 per cent in the latest quinquennium. It is doubtless due to this greater security that the district owes its improvement in maturity which on average is nearly fifteen thousand acres more a year than it was at last settlement Tarn Taran tahsil alone of the three has no share in this increase but like the others it shows improvement in the quality of the acreage which in the district as a whole includes some 180,000 more irrigated acres than it did at last settlement. 8·5 per cent of the annual sown area fails to mature—8·9 in Tarn Taran, 7·3 in Amritsar, and 9·7 in Ajnala. At last settlement the figures were 9·8, 9·2, 9· and 12·4.

The autumn harvest has advanced at the expense of the spring in all tahsils and there have been some distinct changes in the popularity of crops. While wheat is still the largest single crop it has lost a lot of ground since settlement as a separate crop in Ajnala and in every tahsil as a mixed crop and with it gram has also fallen from grace. Cotton shows the most remarkable advance to favour (in this district it is almost entirely *desi*) and cane and *toria* have also improved their hold. On the whole the tendency has been towards cash crops. The percentage variation is shown in the following table:

AMRITSAR DISTRICT]

[SECTION A.

SECTION 1.

Tehsil	Period	Kharif							Rabi									
		rice.	maize.	sugar-cane.	cotton.	baajra.	fodders.	others.	total	wheat.	barley.	gram.	mixed wheat & gram.	oil seeds.	fodders.	others.	total.	
Tarn Taran	Third regular settlement.	2.6	5.7	1.1	2.9	.4	14.5	5.4	32.6	24.0	1.4	13.0	18.1	2.0	7.3	1.6	67.4	
	Last settlement	...	2.8	5.0	.8	5.7	.1	9.8	1.2	25.4	23.3	1.1	8.3	28.1	2.8	9.7	1.3	74.6
	Now	...	2.9	4.0	2.0	11.2	1.8	10.7	1.3	33.9	23.7	.8	4.5	17.2	4.9	13.5	1.5	66.1
Amritsar	Third regular settlement.	3.4	5.1	3.9	2.7	1.3	13.1	8.0	5	27.0	2.8	3.2	16.9	2.5	7.8	2.3	62.5	
	Last settlement	...	3.8	4.9	2.7	3.2	.4	14.2	5.1	34.3	22.9	2.0	5.1	22.8	2.0	8.5	2.4	65.7
	Now	...	3.9	4.1	4.3	7.3	1.6	12.7	3.8	37.7	25.1	1.4	3.8	14.8	2.7	12.6	1.9	62.3
Ajnala	Third regular settlement	6.6	7.3	3.8	3.3	.6	6.6	2.6	30.8	42.5	6.1	3.4	2.9	2.1	8.8	3.4	69.2	
	Last settlement	...	7.6	5.8	2.5	3.9	4	6.3	1.4	27.9	40.6	3.9	4.5	8.3	1.7	9.2	3.9	72.1
	Now	...	7.6	5.0	3.5	5.8	1.5	6.4	1.3	31.1	36.0	2.4	3.4	7.4	2.6	13.4	3.7	68.9
District	Third regular settlement.	3.7	5.8	2.7	2.9	.8	12.2	6	34.1	29.1	2.9	7.3	14.5	2.1	7.8	2.2	65.9	
	Last settlement	...	4.1	5.1	1.9	4.4	.3	10.7	2.7	29.2	26.7	2.0	6.3	22.0	2.3	9.2	2.3	70.8
	Now	...	4.3	4.3	3.1	8.6	1.7	10.5	2.2	34.7	26.9	1.4	4.0	14.2	3.6	13.1	2.1	65.3

6. For the purposes of assessment the natural distinctions of soil are ignored and differentiation based on irrigation or lack of it, is regarded as adequate. The people however
 Soil distinctions, recognise the following soils :

Rohi :—land lying in or near a depression, which by reason of surface water collecting, has become hard and clayey.

Maira :—a firm level loam, often reddish in colour and easily worked.

Tibba :—soil much mixed with sand, which will not form into clods, found in undulating ground and liable to be blown into ridges.

Doshahi :—a somewhat indefinite term, used to describe a soil which is none of the other three, usually mingled clay and sand.

Rohi, Soil give the heaviest yield, but requires moisture steadily and constantly applied. In a very wet year it is liable to become waterlogged, and the crops grown in it suffer accordingly. In a very dry year or when the supply of artificial irrigation fails, crops grown on it succeed no better. Regular and ample, but not excessive or deficient, moisture or irrigation is required. It is the soil most valued by the people, and is the best for rice and other valuable irrigated crops. *Maira* is the next in value, being a clean soil, easily worked and weeded, and is that most commonly met with in Amritsar. Excess or failure of moisture works less harm to crops grown in it than to those raised on *Rohi*, and it is especially suited to maize and wheat. *Tibba* is looked on as an inferior soil, and on this the yield is never heavy. It is not suited for irrigation as water travels slowly on it. But it succeeds with less rainfall than either *Rohi* or *Maira* and the more sandy it is, the less it suffers from brought Evaporation, so long as the sand is fine and not coarse, takes place slowly and it is therefore classed as a cool or *Thandi* soil. But excessive rainfall is injurious, as it is apt to wash away the soil from about the roots, while high winds on exposed tracts may smother the plants in blown sand. *Moth* and gram suit it best and melons succeed well enough in it. *Doshahi* is

not easy to recognise. The people will describe their own *rohi* as *doshahi* when they wish for any reason to depreciate it or will apply the term to their neighbour's sandy soil, when they have an object in making it out better than it really is. *Ghasra* is a term applied to a mixture of clay and sand in the Ajnala Bet, and *rakkar* to a poor shallow soil, with grey river sand at a short distance below the surface, also most frequently met with near the rivers. Such a soil needs a long rest, and ample and timely rain, and is apt to be infested with rats. *Kheba* is used to describe a thick layer of recent alluvial mud, loose in texture, left by the receding of river floods, which has not had time to settle and harden and *goira* means the artificially manured belt of land round the village site, and the soil found in it.

These distinctions are not, however, of the same importance in this district, as they are in others, owing to the prevalence of canal irrigation, and the zamindars only apply them to *barani* lands. The four branches of the canal, which traverse the district from North-east to South-west command practically the whole country between the high bank of the Beas and the Sakki *nala* in Ajnala. The only tracts that receive no irrigation from the canal are the part of Ajnala between the Sakki and the Ravi and that portion of the Amritsar tahsil, which lies north of the Grand Trunk road and between the Patti Rohi and Kasur Nala. In the latter tract there is much sandy undulating soil but almost every village possesses a *chak* of rich well land. The Kasur branch of the canal crosses this part of the district but no distributaries are taken out of it till it reaches the Grand Trunk road. Of the 356 estates in Tarn Taran tahsil 290 receive perennial irrigation, 29 *kharif* supplies and 15 a mixed supply while only 22 get no canal water at all. In Amritsar tahsil as many as 139 out of 387 get no canal water while 122 have perennial supplies, 105 *kharif* supplies and 21 a mixed supply. Ajnala tahsil is least fortunate for 198 of its 347 estates have no canal irrigation. 17 of the 149 which are irrigated get *kharif* supplies only. The Urban and Suburban circles have been included in this analysis.

7. The system of cultivation pursued in the district will be best described by considering it with reference to whether the crop is grown with or without the help of irrigation. The district is classed as submontane, and the greater part of it is secure against very serious failure of either the summer or winter rains, but the certainty of each harvest is still further secured by ample irrigation, both from privately constructed wells and from state canals. This irrigation also admits of superior staples, such as sugar cane, cotton, maize and rice being grown, and enables a far larger area to be put under wheat than would be the case if the cultivator had to depend on rain alone.

8. To take *barani* cultivation first. The agricultural year begins with the *kharif* harvest, or, say, from the 15th of June. Before this, while the *rabi* harvest is ripening, or in the month of March, the arrangements for the next year are usually made, and men who have not enough land of their own for their needs have entered into agreements for the lease of lands belonging to others for the coming year. But whether the cultivator be owner or tenant, he has to take advantage of what rain falls, during the months of May and June, to plough what *barani* land he intends to sow in the *kharif*. When the first heavy fall of rain occurs in July the land is ploughed again, and when ready, is sown with great millet (*jowar*) mixed with pulses, such as moth or mung, or both. From this the cultivator expects to get some grain for himself and family, but chiefly fodder for his cattle. The crop is reaped in November and the fodder is stacked for use in the winter months. The amount of grain obtained from the *jowar* depends on the season, and on whether it is sown thick or thin. A good head of grain will only be obtained if it is sown sparsely. If the land is sandy and too light to support the heavy stalks of millet, pulses alone are sown. *Moth* leaves make excellent fodder, and are brought up in the district by the Gujar cow-keepers of the city, but cannot take the place of millets, a fact which puts the proprietors of sandridge villages at some disadvantage. After the *kharif* or *sawani* crop has been reaped,

the land lies fallow for two harvests, or a full twelve months, but is ploughed whenever rain allows this to be done, especially in July and August. Then in October or November, it is sown with mixed wheat and gram, the proportion of wheat being five-eighths, or it may be two-thirds, of the whole. But the proportion depends a good deal on whether good rain has fallen just before sowing time. If it has, the proportion of wheat is increased. According to the character of the winter season, the wheat or the gram succeeds best. If the winter rains are short or untimely, the gram comes up better than the wheat; if plentiful, the wheat is far the better crop. In parts of the district rape (sarson) is sown in drills, wide apart, among the wheat and gram. This crop is reaped in April, the rape being cut separately, unless it has already been pulled up green for fodder, and the wheat and gram are cut together. In intended for home consumption, they are threshed together; if the wheat is to be sold, it is winnowed out. Harvest operations last till the beginning of June after which, if all goes well, the land is ploughed as above stated for the kharif crop of *jowar*. This is the ordinary rotation on *barani* lands, and is rarely departed from. No cultivator will put all his land down with either a *kharif* or *rabi* crop, but the *barani* land is cropped in alternate blocks, that on one side of the village being under wheat and gram (known as *berrera*) and the other being in its second season of fallow. Thus it never happens that the whole *barani* land of a village is under crop in one season. Nor will a tenant, if he can help it, arrange to take, in one season, only land whose turn it is to be cropped in *kharif* or in *rabi*. He will take some fields in which according to the rotation he can sow *jowar* or pulses, and others in which he can, when the *rabi* comes round, sow wheat and gram. When in any season the rains fail, and the crop is either not sown at all, or is sown and withers, the rotation is of course thrown out, and a catch crop is put in out of tune, but it is not often that matters are so bad as that. The agriculturists have by this time learnt the use of harrows and find these very useful implements to break crust from the newly sown areas if and when sowings are followed

by showers of rain. They are also aware that preparation of mulch by breaking the surface conserves moisture. The use of various kinds of implements is getting popular for the conservation of moisture.

9. On well lands the staple crops are maize, cotton, cane, wheat, *rabi* fodders and vegetables. The three first will generally be found occupying fields lying close to the well, so as to admit of their being watched, and for economy of water in the hot season. Not that wheat is confined to the more distant fields, for the three crops named by no means take up all the land within easy reach of water. Rotations are not very strictly observed, but it may be taken as a rule, that cane is put in, either in land which has been specially kept fallow for a year (*varial*) or in land which has borne maize or cotton in the previous *khari*f, and has given a crop of trefoil fodder (*senji*) in the spring. Berseem and shaftal are steadily replacing *senji* as *rabi* fodders. Ratooning of sugarcane is becoming a general practice. After the cane comes wheat. *Toria*, a late autumn oilseed, may be put in on the wheat stubble. But much land on the wells will be kept for wheat alone, with a fallow between each crop, the succession being broken by a *khari*f crop to prevent exhaustion. This is more common in parts of Tarn Taran, where cane is less grown. In the interval between the reaping of the *rabi* (March or April) and the sowing of the maize in July or August, when nothing else but the young cotton and cane will be growing on the well lands, some of the fields will always be taken up with melons, or with *chari*, the name given to green *jowar*, grown for fodder. This last is not allowed to ripen but is fed to cattle mixed with chopped wheat straw (*bhusa*). In parts of the district where *rohi* land is common rice is grown on the wells, sometimes alternating with wheat. This is found in Ajnala chiefly, north of the Sakki *nala*. But the yield is never so heavy as that of rice on canal lands. The cultivation of well lands is neat and careful, the limits of the fields are seldom changed except that they are subdivided, and the land is economised to the utmost.

Superior cultivation on wells.

Usually the cane crop is the only one which is fenced with thorn branches stuck in the ground all round it, but the paths by which the cattle pass to and from the well are nearly always edged or protected by banks of earth topped with thorn or cactus. The old type of wooden persian wheel has generally given way to the improved iron model.

10. Canal cultivation is less tidy. Rice, maize, cane, and wheat are the chief crops grown, and to a less extent cotton, but on the rice stubbles there is a good deal of barley, of the pulse known as *massar*, as well as *senji*, shaftal and berseem, crops which need constant and ample waterings. There is less adherence to rotation on *nahri* than on *chahi* lands, more double cropping, less manuring, and on the whole less careful and more varied cultivation. Much canal land is kept for rice alone, unless, during the *rabi*, gram or one of the three stubble crops above mentioned is put in. But these are quite subordinate to the rice crop: the charges on account of canal water are too heavy to admit of the land being wholly given up to the growing of inferior crops. Canal irrigation brings in large returns with a smaller expenditure of labour than well irrigation. The people like it on account of the saving in labour, and the certainty of the crop, though there is the disadvantage of not always getting water when most required, and of having to submit to more official interference. Once committed to taking canal water on a certain area of land, it is hard to go back and return to any other system, when the wells have been thrown out of gear, and the land has hardened so that *barani* cultivation would yield but a small return. On the whole, the people will generally say that a well, in good working order, well equipped with strong cattle, watering an average area of, say 16 to 20 acres, and with soil of average fertility, not too far from the sources of manure will yield as good, if not a better, return than an equal area of average canal land.

Cultivation of
canal irrigated
land.

11. Sailab crops are not of very great importance. Much depends on how the village has been treated by the river and on the nature of the silt deposited. Sugarcane is grown to the extent of 1200 acres on this land, but is not of a very good quality. Cotton and rice are not much grown, but maize, despite its liability to suffer from excessive moisture occupies about 1300 acres. Maize, bajra and sugarcane are the principal autumn crops, and wheat, barley, mixed wheat and gram and melons the principal rabi staples, wheat being far the most important. About 16,000 acres of sailab wheat are raised yearly. Manure is rarely applied, for the silt itself is fertilising, and it is not often that more than one crop is taken off the same land in a year, or, if it is taken, it is not such as to exhaust the land.

12. A considerable part of the cattle dung is used for fuel, being preferred for cooking purposes to wood, which also is too valuable to be used for burning. Wood is burnt on the funeral pyre and sometimes in brick kilns, but the rest of it, excluding shade trees, is only sufficient for the making and repair of agricultural implements, roofing, well tackle, hedging and the like. The manure used consists of the remainder of the cattle dung, mixed with ordinary farm yard and house sweepings, and refuse fodder and litter. The *goir*, or land near the village site naturally receives a fertilising supply of night soil, the habits of the people in this respect being primitive, but it is not always that this is deposited on the cultivated land. The lanes and waste land within easy reach of the village are usually foul with night soil, which it is no one's business to remove. Efforts to have the manure pitted in properly made pits have found some success in advanced villages. The Agricultural staff, the Rural Reconstruction staff, the Sanitary Inspectors and the Officers of the Agricultural Department have impressed upon the villagers the necessity of keeping their manure in pits, and away from their residences. The burning of dung cakes is reduced but not altogether stopped. The use of artificial manures has become well known to the cultivators, but due to the heavy

price these are used only in gardens and for growing vegetables at limited places. From the manure heaps round the village the stuff is carted on to the fields and the well land receives the most of it. Maize, cane, and cotton are always manured, and sometimes wheat, but this crop more often follows other manured crops and so is benefitted indirectly. Tobacco is most carefully manured in Muhammadan villages and Arains may be seen heaping it up round each stalk of the plant.

13. On the total cultivated area of the district, (732186 acres, 911647 acres of crops are sown annually. Of these 8 5 percent fail and 8,34,106 acres come to maturity. In other words on each 100 acres of cultivation about 114 acres of crops are raised. The percentages for the three tahsils and the district are as follows :—

Double
cropping.

Tahsil.	Percentage of total cultivated area harvested in			Cultivated area in acres	Percentage of sown area failed in		
	kharif	rabi	total		kharif	rabi	total
Tarn Taran ...	39	73	115	3,07,375	9.9	8.3	8.9
Amritsar ...	44	72	116	2,59,453	8.4	6.7	7.3
Ajnalā ...	34	75	109	1,65,358	11.4	9.0	9.7
District ...	39	75	114	7,32,186	9.6	7.8	8.5

14. The plough used by the people is a very simple instrument made entirely of wood, with the exception of the coulter which is supplied by the village blacksmith as part of the work for which he receives a harvest wage in kind. Both the *hal* and *hallar* are used, the latter always in the Manjha and throughout the district in new and heavy land, the former in most of Amritsar and Ajnalā. The *hallar* is of the same nature as the *munna*, which is used in the Doaba, but is not quite so heavy. The whole is so light that it could be easily carried on a man's

Agricultural
implements :
(a) the plough.

shoulder. Practically, the whole apparatus consists of only four parts, (1) the wooden yoke (*panjali*) which lies across the neck of the bullocks behind the shoulder hump, and which is kept in its place by four vertical bars (the outer ones or *arlis* moveable and the inner ones or *mattias* immovable), fitting on to the lower cross bar under the neck; (2) the beam or pole fastened to the yoke with a piece of leather termed *nara* and fitting into (3) the iron shod sole which does the work, and (4) an upright handle with which the ploughman does the guiding. When returning from work the beam is loosed from the yoke, reversed and hitched over it (*harnali karna*) by the coulter. Land is often ploughed ten or twelve times for valuable crops, and the cultivation must be very rough when the ploughing is done only once. The field may be ploughed in sections up and down or in narrowing circles, beginning round the edge of the field, but the turn is invariably to the left (the course followed in the track round the well wheel) and the bullocks are so used to this that they could hardly be made to turn to the right. Three or four ploughs may often be seen at work in one field, each following the other (but in a different furrow) when it is wished to take immediate advantage of the state of the ground and get the seed in at the right time. The people often do a day's work in this way for a neighbour, the obligation being returned some other time. As the object is to disintegrate the soil, without turning it up and exposing it to the air more than is necessary, the ploughing is never deep, a few inches sufficing, especially in sandy land. Still it is hard work in stiff land, with the small confined fields into which the ground is divided, for the bullocks are often imperfectly trained, and are guided only by the frequent application of the *parani* or oxgoad, sometimes furnished with a lash of strips of leather.

A few farmers use improved ploughs of the Meeton and Hindustan types and those who do not own one try to borrow as they appreciate the improvement in working the land.

Ploughing is succeeded on most soils by working over the ground with the flat levelling beam or *sohaga*, which crushes the clods and flattens the surface to keep the moisture in, thus leaving as small a surface exposed to the sun as possible. If the seed has been sown the *sohaga* covers it in the furrow. Two yoke of oxen are harnessed to the *sohaga* all four abreast, and a man is required to each yoke. They ride standing on the *sohaga* to weight it down, steadying themselves, and encouraging the cattle, by holding on to the tail. Fields which are intended for rice cultivation, are often worked over with what is called a *kaddo* instead of the *sohaga*. This is a flat beam with six or seven nails protruding from it. The nails tear up the land while the heavy beam crushes the clods and flattens the surface in the same way as the *sohaga* does. Only sandy soil can be broken up when it is dry. Other soils require to be moistened with rain, or artificial flooding, before they can be properly ploughed. The state of the ground when it is neither too wet nor too dry to be worked is known as *watar*. Stiff rice land is even ploughed when there are two or three inches of water standing on it, and this is real hard work for the cattle. But on *maira* soil, after sufficient ploughing has been done, the seed is sown either broadcast or with a drill (*por*), a bell-mouthed bamboo tube tied to the handle of the plough. If the sowing be broadcast the *sohaga* is used to cover the seed; if through a drill, the heel of the sole of the plough, which lies behind the mouth of the *por* effects this. But the *sohaga* is always used on well land for seed covering. After this, on well and canal lands, the ground has to be divided into compartments or *kiaris* for convenience of watering. This is done with a rake (*jhandra*) fitted with broad wooden teeth, on the same plane as the handle, and worked by two men, one of whom guides the handle, and the other, facing him, pulls by a rope, fastened to near the junction of handle and blade. This is used to make temporary water channels (*ar* or *ad*) but the main channels for well water are kept for years untouched, so as to leave them firm, and save waste of

water. They are even weeded, to keep them clear of grass and secure a flow. These compartments are raked off as a finishing touch after the seed is sown.

(c) Other
implements. Other implements in general use are the *kohari* or common axe for cutting wood and the *toka*, an axe or chopper with a long handle fitted with an iron blade about 6 inches in length: it is used for cutting up *jowar* stalks for fodder. When fitted with a lighter blade and a longer handle, it is known as a *gandasa* or *chhawi* and was used for cutting branches for hedging. Its possession has now been made illegal under the Arms Act and the *kohari* is very generally used instead for hedging purposes. Reaping is done with a small toothed sickle called a *datri*, which requires frequent sharpening of the teeth, as they get worn down very quickly, and for weeding a short-handled spade or *ramba* is used, the cultivator going through the field in a sitting position and digging out the weeds between each plant. The *gandala* is a stick shod with iron, which is used for digging narrow deep holes, into which hedging-stakes are placed, and is a handy tool on house-breaking expeditions. The *kahi* or mattock is an indispensable implement, and at some times of the year is the one most often in the cultivator's hands. It is used for all kinds of digging or shovelling earth and even for stubbing up roots. The *parlu*, a heavy wooden roller, is only met with in parts of Tarn Taran, where there are wide stretches of hard *barani* land and is used to crush clods in hard *maira* land instead of the *sohaga*. A heavy wooden mallet is used for beating out *munj* to produce rope. The *salpang* is a wooden fork with two prongs, something after the fashion of a pitch-fork, with which the Jat gathers heaps of the prickly *malha* or thorny dwarf *ber* for hedging and for cattle enclosures round the wells. When fitted with more than two prongs it is used to gather the loose straw and grain on the threshing floor (*pir*) and to toss it when wetted by the rain. The sheaves of wheat are lifted by hand and not with the fork. *Chhar*, a long stick with a hooked blade at the edge of it, is used by goat herds or shepherds for cutting branches

from high trees. The leather blinkers, which are placed over the bullocks's eyes when working a Persian wheel, are called *khopa*. Threshing is done on the hard beaten ground, on which the crop is spread out; the thresher (*phalla*) is then dragged round by two bullocks, till the grain is extracted from the husk. Winnowing baskets, which are called *chhajj*, are made of the thick stalks of the *sirkanda* grass by Chuhra and Mahtams; they are filled with the broken straw, husks and grain and emptied in the air, the action of the wind separating the heavy grain from the *bhusa* or chaff. The *trangli*, or fork, which saves time and labour, is also used for winnowing.

15. Thirty thousand, seven hundred and sixteen persons are returned in the census of 1931 as farm
Hired labourers. servants or field-labourers. So many land-owners of the district, especially of the Tarn Taran tahsil are away on military service that hired labour is required on a comparatively large scale for the reaping of the spring harvest and also part of the rice crop. The precise extent to which hired labour is employed is very difficult to estimate, varying as it does largely from year to year. A severe outbreak of plague coinciding with the ripening of the wheat harvest means that labour must be imported from elsewhere and liberally paid. It was calculated that in Tarn Taran roughly about one-fourth to one-third of the area under *rabi* cereals has to be cut by hired labour; in Amritsar tahsil the proportion is much lower. The employment of village menials as agricultural labourers and the system of payment in kind to them is discussed later on in this chapter under the head of wages.

16. The comparative importance of the principal crops has been tabulated earlier in this section. The
Principal crops;
(a) Wheat. chief among the *rabi* crops is wheat. It is the principal staple of the district. On irrigated land it is grown unmixed, but on *barani* lands it is usually grown mixed with gram, the proportion being about 5 of wheat to 3 of gram. The mixture is known as *berrera*. Both wheat and *berrera* are sown in October or November, the

berrera generally rather before most of the wheat on irrigated lands. The *barani* crops do well enough without rain up to Christmas, if there has been the proper amount of moisture on the soil at sowing time. But, by Christmas, rain is expected, if only to keep down the ravages of the white ants, which do the crop much harm. After good rain in January and February, not much more is required in March, and the crop is ready for harvesting by the beginning of April. The wheat on well and canal lands is later, but with them the harvest is seldom delayed after the 15th April. Threshing and winnowing operations take a long time, and it is often the beginning of June before the whole crop has been cut, carried, threshed and taken home.

Several kinds of wheat are grown. Since last settlement, low-yielding types have been replaced by the better types recommended by the Agricultural Department. Type Cross 591, the current best type, is now prominent in the district along with Punjab 8-A. Cross 518 is also being introduced on rich land. *Vadanak* is rarely seen. The beardless type is found on the lands of some conservative farmers.

The land is always carefully prepared for wheat, ploughed whenever an opportunity occurs during the half-year preceding the sowing, and flattened out and pulverised with the *sohaga*. Little, if any, weeding is required on irrigated land, except when the *buzhat* weed appears. Other weeds make no head at that season of the year, but if it is a wet spring the natural clover (*maina*), which is found in highly irrigated tracts, is apt to choke and obstruct the plant at a time when no weeding is possible. *Pokli* weed grows abundantly along with the wheat and has become a general nuisance. Constant drives for cutting and burning it are making the farmer *pokli* conscious but he is still slow in following official advice.

The wheat grain is separated from the straw and chaff in the well-known primitive way which has been followed by the people for centuries. The sheaves are heaped up close to the smooth bit of hard ground selected for a threshing floor. A

sheaf is about as much as a man can carry as a head load, and will yield from 12 to 16 seers of grain. A number of sheaves are loosed and spread out round a stake driven into the ground. To this stake the muzzled oxen, three or four abreast, are fastened and round it they tramp, beating out the grain with their feet, or to hasten the process, dragging after them a rough arrangement of wood and brushwood, shaped like a raft, and weighted with clods or lumps of fused brick from the kiln. Gradually the grain is separated, and is then winnowed from the chaff by being allowed to fall from the *chajj* or basket held aloft by the winnower. In May there is generally a hot wind blowing at some part of the day, which helps the process, and the hotter and fiercer the wind the sooner is the harvesting ended. Damage may occasionally be done, especially if the harvest be late, by unimely thunder showers. If repeated the showers swell the grain, make it sprout in the sheaf, and blacken the *bhusa*. But fortunately they are exceptional, for April and May are dry months. The broken straw or *bhusa* is carefully stored in a sheltered place near the well, in conical stacks, neatly thatched with a part of the straw which has been left long, and set apart on purpose. This is the main dry fodder for the working cattle during the next winter. The *bhusa* is raked out through a small hole at the foot of the stack until the latter falls in. The grain is taken away by potters on their donkeys to the village where it is stored in *kothis* or granaries for sale, or in *bharolas* for household use.

Gram (*chale*) forms part of the crop already described under the name of *berrera*, is also grown alone on (b) Gram. sandy lands without irrigation, and appears as a second crop on rice stubbles, or on fields which have borne a summer crop of *chari* or green *jowar*. It does not require careful cultivation, but like most spring crops needs to be first sown in fairly moist ground to germinate well. It is harvested, if grown alone, about the same time as barley, but before the bulk of the wheat. It is a hardy plant in most respects, and is only liable to damage in poor soils when rain holds off for long in early spring, when high winds with dust occur at blossoming.

time in March, or when there is a long spell of damp, cloudy, thundery weather. Of late years it has suffered greatly from blight which dries up the plant before the grain matures. A blight-resistant variety (F-8) is being introduced. Gram may also be thrown back, when the shoots are just coming through the ground, if light showers, followed by hot sun, cake the surface of the *maira* soil. In such a case there is nothing for it, but to break up the crust with the *sohaga*, or even resow the field. The growth of *maira* is also specially injurious to gram sown on rice stubble. The young plants make excellent food for horses when cut green in March or early April, and the grain is well known as a food for both horses and cart bullocks. The improved type 7 which is yellow is replacing the old grey gram.

Rice is grown about equally in all three tahsils, slightly less in Tarn Taran than in the others, the lighter soil of that tahsil not favouring it so much. The soil suited to rice is limited in extent, for putting aside the small area grown on the wells in the Ajnala *Hithar*, the soil must be *rohi*, or very nearly so, and it must have canal water. Given these two conditions the Amritsar Jat will grow rice wherever he possibly can, and will grow it year after year. The plant is known all through the district as *jhona*, whatever the variety grown. The old low-yielding rice is giving place to better types such as Jhona 349, Basmati 370 and Palman Sufaida 246. In May and June the land devoted to rice is flooded and ploughed. Nothing short of saturation will make the stiff clay rice-land fit for the plough. The best rice is transplanted from nurseries (*paniri*), but a great deal is sown broadcast. *Lawen* and *bhij:n* are the terms employed for the two processes. The former certainly gives a larger yield. Changars and Purbias are employed to do this work. Rice requires constant and ample watering and does best, while growing, when it is kept standing in two or three inches of water, but not after it is in ear. A failure of rain or canal water in August is especially injurious. It is reaped in October, and ripens very quickly. The grain is very loose in the ear when ripe, and in estimating the yield

the amount that is dropped during harvesting or shaken out by high winds has always to be allowed for, as well as shrinkage in weight as the grain dries. The grain is either trodden out in the usual way by oxen, or flogged out by hand, the labourer bringing the sheaf down on the edge of a small clay trough. It is the one crop to which a small admixture of *kalar* in the soil does no great harm, rather the reverse it is said. The straw is of little use, cattle only eating it if they can get nothing else, which is seldom the case at the time of rich harvest. Consequently in rice villages much of the straw or *parali* is left out in the fields till far into the winter and is spoilt. The coarser kinds are known as *dhain* and *kharsu*. The former is grown in the beds of drainage lines, and the latter in the moist alluvial lands on the rivers. They are of little value or importance.

Maize used to be more grown on the wells than on canal lands, but average of the selected years
(d) Maize. taken at the recent settlement shows that nearly 52 percent of the area covered by this crop is canal irrigated, while barely 37 per cent is *chahi*. The change has probably been brought about by the greater certainty in the supply of canal water, as maize needs, besides careful cultivation, hoeing and weeding, constant but moderate supplies of water. It forms the principal autumn staple of the Trans-Sakki villages, where it is still chiefly a *chahi* crop. It is known as *makki* or *makei*, and at least three kinds are grown, the one with the red grain being the commonest, next the white grained, and lastly the Lahori which has a very short stalk. The ground is carefully prepared and the seed is sown at the end of the second week in July. The area sown ranges from forty to fifty thousand acres. It is liable to damage by birds and jackals, and raised platforms are made when the crop is ripening on which the watchers sit to scare off the birds. Severe damage from the maize-borer generally confined to the crop sown in July or early August has popularised sowing late in August. It is reaped in October and November. What has been said about the grain of rice drying and losing weight applies also to maize. The grain has

to be beaten out of the cobs or *challis* with a heavy stick. The core of the cob is used as fuel. The straw is chopped and fed to cattle, but is not good fodder, and where there is much of it, it is often left out and spoilt by damp and heavy dews. It used to be a common practice to take a canal watering for the maize just before it was reaped, pull up the stalks out of the saturated ground, and put in a crop of *senji* at once. This got a good start in the richly manured land and the cultivator escaped paying water-rates for the *senji* crop. But under the present scale of water-rates *wadh* or stubble waterings are separately charged for.

Cotton is grown both on well and canal lands, but succeeds better on the former. It is now the
(e) Cotton. most important of the *kharif* crops. Its popularity is due to the fact that it involves comparatively little labour, as two ploughings and four waterings will produce a very fair yield. As a rule, it is only weeded twice and does not receive much, if any, manure. Sowing in lines is still uncommon. Cucumbers, melons, chillies, and even thinly sown stalks of millet fodder are grown in the same field by the Ajnala cultivators which makes it very difficult to estimate the outturn of cotton. *Desi* cotton is general, the area under American varieties being very small. Improved Mollisoni has replaced the old mixtures. Picking will begin in September and last through December. This is done by the women and children of the family, unless seclusion of women is the custom. When the leaves drop, and the last picking, which is by custom allowed to the *Churas*, has taken place, the sticks are cut down close to the root and used for roofing purposes, or are wattled to form the enclosing sides of dung carts and shelters for chopping fodder. *Senji* is almost always sown in among the cotton, about the time of bursting of the pods. The largest area of cotton is grown in Tarn Taran, mainly on canal lands. About half the area of unirrigated cotton is also grown in that tahsil. Here the yield is more uncertain still, and inequalities in the soil cannot be corrected by the application of manure. The area under *barani* cotton fluctuates much and depends largely on whether

there has been good rain in February. That under irrigated cotton is very stable from year to year.

The cultivation of sugarcane has increased greatly since the settlement of 1911 when 16000 acres were

(f) Sugarcane.

under this crop, as compared with 26000 acres now. About half the area cultivated is in the Amritsar tahsil. After repeated ploughings the soil is ready for the reception of the seed in March or April, when the seed canes, for which about a twentieth of last year's crop is required, are unearthed from the pit, in which they have lain buried for three or four months, cut into lengths of about nine inches, and placed in the highly pulverised soil. The young crop needs constant watching, watering and weeding during the months of extreme heat which follow until the rains break, and during any temporary cessation of the rains, until the crop is ready for cutting, watering has to be given steadily. The canes are, as a rule, carefully fenced, and except in the Ajnala Bet the land receives a quantity of manure, both before planting and afterwards as top dressing. Cutting begins in December in the Ajnala Bet, and is carried on in January and February in the rest of the district. In a wet season the canes may stand uncut in March or even April, but if as late as this they are worth little and are largely fed to cattle. The canes are stripped of leaves, and when cut, are from three to five feet long, when they are passed through the *chakra* which is generally a three-roller sugarmill. The juice is boiled in shallow iron pans in the *gurial* or boiling house and is generally sold by the cultivator in the form of *gur* in lumps or *roris* weighing about a pound and a half each. *Shakar* is now commonly prepared. Further refinement is not often attempted, nor is there much manufacture of *rab*, except in the upper part of the Nahri circle of Amritsar, and there only in the best villages. Five kinds of cane are grown. *Paunda* of two varieties, known as Jullunduri and Sabaranpuri) is a thick heavy cane, grown principally near the city, where it is heavily manured from the city sweepings. It is also found in a few Upper Manjha villages of the Tarn Taran tahsil and in the best villages of the Nahri and Uthar circles of Ajnala. It is not

[AMRITSAR DISTRICT]

[SECTION A.]

pressed for juice but sold for chewing by *halthais* or sweetmeat-sellers. The canes grown on an acre will fetch Rs. 300/- or even Rs. 350/- but the cost of cultivation (ploughing, trenching, watering, weeding, manure and watching) is enormous. While the *paurda* is young, vegetables (generally leeks or eggplant, known as *bhaingan*) are grown on ridges in the same land, the cane growing among them, but the vegetables are off the ground before the cane attains any height. *Katha*, a thin red hardy cane is far the commonest kind grown throughout the district. *Kao* is a thicker cane, of a whitish colour, with a broader leaf, requiring less weeding it is said but much water. It requires more water than can be given from an ordinary well. The other two are *teru* and *dhaulu* of a value about midway between *kao* and *katha*. The former of the two is not often met with, being more grown in Sialkot, but *dhaulu* is a good cane and is often grown mixed with *katha*. Sometimes after the canes have been cut down, the land is weeded, manured and watered, and the plants are allowed to sprout again for what is called a *mudhi* crop, but the yield of this is small, probably not more than half that of a planted crop. Improved varieties (Coimbatore 285, 223, 312 and 313) are being introduced. Their outturn is much higher and their ratooning value better with consequent reduction in cost of cultivation. Cane growing is not a special feature of the district as it is in Hoshiarpur, Jullundur and part of Gurdaspur. The gross value of the outturn is large, but the plant occupies the ground for at least a twelve-month, or even a year and a half, if the time spent in preparing the ground is taken into account, and the labour and cost of cultivating it and extracting the juice are great. It is purely a revenue crop: very little of the produce finds its way to the cultivator's family, or escapes being turned into cash.

The amount of barley grown varies very much from year to year ranging between twelve and twenty
 (g) Barley. seven thousand acres; it is more grown in Ajnala and Amritsar than in Tarn Taran. It is raised with and without irrigation, by itself or mixed with gram, but rarely with

wheat, and sometimes on the stubble of rice. It does not seem to exhaust the land so much as wheat, and, ripening quickly, it is off the ground early in April, making room sometimes for a melon crop. When rain has held off in late autumn, and the *rabi* crop is shorter than usual, advantage is taken of the first Christmas rains to put in a crop of barley. Wheat would never thrive if put in so late, but barley is a convenient catch crop. On small plots on wells it is sometimes cut green for fodder and if allowed to ripen, it is not unusual to pluck the ears while the crop is standing and thresh out the grain by itself. The standing straw is then cut down and used for thatching stacks of *bhusa*. On well lands it is usual to allow the Chuhra who works on the well to sow a row of barley at the edge of the wheat fields and especially close to the water-course.

Jowar is universally grown and covers a large area; in the crop returns it is concealed under fodder.

(h) *Jowar*. This makes comparison with earlier years impossible. The cultivator rarely hopes to obtain any grain from the *jowar* and the almost universal custom is to cut it all as fodder, only the small quantity sown to fence in the maize fields being allowed to ripen to provide seed. Thus he does not depend on *jowar* grain for food throughout the winter like the cultivator in some districts south of the Sutlej, but he can hardly do without the broad-leaved stalks as fodder for his cattle. The green *jowar*, which is not allowed to ripen and which is grown for fodder only, at a time of the year (May and June) when no other green fodder fit for stalled cattle is available, is irrigated both from wells and canals. The *jowar* crop is sown at the beginning of July after the first heavy fall of monsoon rain. This is one of the busiest times of the year, and no effort is spared to get the seed into the ground at the most favourable opportunity. A good deal of the seed is imported from the Jullundur Doab and Ferozepore. It is sown mixed, as a rule, with *moth* and *mung*. It is grown on the well-known *dosala* rotation already described, the *jowar* being preceded by mixed wheat and gram, or gram alone, and followed by a whole year's fallow after the harvest in October and November. The *moth* and *mung* are reaped with

the *jowar*, and the grain of the pulse is then separated. The heads of *jowar* containing the seed are cut off, and beaten or trodden to separate the grain. The stalks are stacked in the field for a time to dry and then piled on the roofs of houses, and other dry places, to be used as fodder throughout the early winter. Villages which lie near the main road, and grow a large area of *jowar* often sell it to men from the city, and this is a not unimportant item in their income. But as winter draws on, there is none to spare, and each man's store of it is carefully husbanded. The crop is known either as *jowar* or *chari* sometimes by the double name *chari-jowar*, but *chari* is the name by which the fodder part of the plant is known. The cattle of the district are so dependent on *jowar* for food, at the time of the year when the bullocks are hardest worked, that a failure of the crop is quite a calamity. Fortunately it does not often occur. Rain in the first week of July, and steady rain at intervals throughout the month, and the next six weeks, is quite enough to assure the success of the *jowar* crop.

Bajra is sown in July, both irrigated and *barani*. It is
(i) bajra. mainly used as a green fodder.

Moth, *mung* and *math* are the three principal pulses grown
(j) kharif pulses in *kharif* harvest. They have greatly declined in popularity in the last twenty years. *Massar* is grown in the rabi. The two first named are either grown separately or with *jowar*. *Moth* is chiefly raised on the light lands of the sand ridge, and does not require so much rain as other *kharif* crops. It will do fairly well in a season when the *jowar* is withered and stunted. The grain enters largely into the food of the people, and the dark green *bhusa*, formed of the leaves after the grain is beaten out, is a valuable fodder for milch and working cattle. A good deal of it finds its way to the city, as it is difficult for the cultivators to store it. Almost all the *moth-bhusa* raised in the sand ridge villages near Jandiala is thus disposed of. Excessive rain washes the soil from the roots and high winds smother the plant in sand. All it requires is moderate rain in the two monsoon months and heavy dews in September. *Mung* can be, and is

grown, on firmer land, particularly in that part of the Amritsar tahsil which lies between the Sobraon Branch of the canal and the Beas. Here it is an important crop. The times of sowing and reaping are the same as for *jowar*, only it ripens a little earlier, and the broad leaves do not make valuable fodder. *Mash* is perhaps the most valuable pulse and gives a larger yield than the other two. A fairly stiff soil with a good deal of moisture is required, and it is often sown near the rivers, but in a rude fashion, without much preparation of the ground. The following winter it is often hard to tell whether a crop of *mash*, has been taken off the ground or not, so little trace of it is left. It is seldom grown along with *jowar*, but is sometimes grown at the foot of the maize stalks on irrigated lands.

Sesamum or *til* occupies usually more than five thousand acres of which one third may be irrigated. A
 (k) *til*. little is grown in Ajnala but the non-canal irrigated parts of Amritsar supply about half of the crop.

Rape is a risky plant to grow as so much depends on
 (1) *rape*. nothing untoward happening while it is in blossom. It is seldom sown alone except in the south of Tarn Taran, and is rarely grown in any form in Ajnala. The commonest method is to sow it in rows, eight or ten feet apart, up and down the fields of *berrera*, a method which gives its spreading plants a better chance. Much of it is plucked up unripe for fodder and for use as *sag* or greens when the wheat is about a foot high. From its spreading habit, and from the show which it makes with its yellow blossoms, it is apt to give a false idea of the strength of the crop, if seen a little way off, and a field will be found to be of a much poorer growth when ridden through, than when seen from a distance. Rape is usually sown with drill in deeper furrows specially made for it after the field is ploughed, and the furrows are not, as a rule, fully covered up after the seed has been dropped in. The seed is proverbially small, and would be liable to be smothered, if buried as deep as wheat or gram. The harvest of rape is an early one, if the frost has not injured it.

Toria, which is a late *kharif* or early *rabi* crop, has come largely into favour of late years, owing to the high price of oilseed, and has to a great extent supplanted rape, especially in Tarn Taran. It is grown on irrigated and unirrigated lands; the total area sown is roughly 28000 acres, of which more than five thousand acres are unirrigated.

Massar furnishes the pulse best known to Europeans as *dal*. It is grown on recently thrown up *bet* lands on the moist shelving lands which line the banks of the *Sakki nala*, and as a catch crop after rice on canal lands. It is especially liable to damage by frost in late February, a single night of which may ruin the whole crop. Otherwise it is a hardy plant and may be grown with success on the most unpromising soils. But the area under *massar* is small, and it is the least important of the pulses in Amritsar, except in the river villages, where it is a useful crop.

Senji, a luxuriant trefoil is grown exclusively for fodder for cattle. It is cut green and chopped up with *bhusa*, jowar, maize stalks or cane tops. It is grown on maize and cotton stubbles almost invariably, less often after rice. The ground is first saturated with water and the seed is then puddled into the liquid mud by the feet of the cultivator. Thereafter it requires no care, except a plentiful supply of water, and, from a Canal Officer's point of view, it is a most wasteful plant. Benefiting by the manure which had been applied to the cotton or maize which it succeeds, it grows fast and heavy and the cutting of a few square yards is enough for a head load. Once cut it does not give a second cutting like lucerne, but directly a part of the field has been laid bare it is ploughed up to be ready for preparation for the cane crop which usually follows it on well lands. Altogether it is an indispensable crop for stall-fed cattle, and is grown in every village where there is irrigation. The large increase in its production, which has taken place of recent years, is probably due to the contraction of the area available for grazing in the Amritsar and Tarn Tarn tahsils.

Senji has been a good rabi fodder on all the irrigated lands and has held its reputation as a fodder and a crop (p) berseem that enriches the soil, but lately berseem fodder has been introduced by the Agricultural Department. It gives 4 to 6 cuttings in the season and leaves the soil rich in nitrogen. This fodder is being carted to Amritsar City from long distances even from up to 10 miles or more for sale to cattle owners in the town. It is relished by the cattle as well as by the horses and is used either alone or chaffed and mixed with bhusa.

The hemp grown is of two varieties, *san* and *sankokra*. It covers an area of one thousand acres yearly, about (q) hemp. half of which is in the Amritsar tahsil. Sankokra is generally planted as a fencing round sugarcane or maize. *San* is only grown in sufficient amounts to provide the ropes necessary for agricultural purposes. It ripens in October, when it is cut and steeped in water, after which it is dried in the sun and worked by hand into ropes.

Melons are grown in the hot weather as an extra *rabi* crop. (r) vegetable Most are grown in Ajnala where some of the and fruits. Arain villages are famous for them, and in the gardens and orchards near Amritsar especially in the Kamboh villages, but there are few wells with *maira* soil which do not grow a patch or two. Both the small yellow melon and the *kharbuza*, or large green water melon are grown, as well as cucumbers. As already stated they are often found in the same field as young cotton, and are out of the way before the cotton begins to shade them. Amritsar city is a good market for this kind of produce, and it is also sold a good deal in the villages, at cross roads, and at canal bridges. The fruit being easily stolen, fields at a distance from a well require watching day and night. Besides being grown on wells melons are raised on sandy lands in Ajnala, and in the Bet lands of both rivers. Other vegetables are onions, carrots, radishes and potatoes. The latter are largely planted on the rich lands round Amritsar city and now form a regular item in a recognised two year rotation. Of fruits the commonest varieties are mangoes,

oranges, plantains, peaches and mulberries. Many fields are planted with rose bushes for the manufacture of *itr*.

Tobacco is only grown on well lands out in the district, but heavy crops are taken off the lands near the city with the help of black liquid sewage which serves both as manure and water. The Sikhs having a prejudice against growing what their religion forbids them to use, the cultivation is confined to Mohammadans, especially Arains. As might be expected Ajnala produces more tobacco than the other two tahsils together, and there it is very carefully cultivated. The average of the selected years shows that out of 2613 acres devoted to tobacco cultivation 1830 are in Ajnala where it is principally grown in the Arain estates of the Sailab and Hithar circles. The commonest kind is that with a pink flower spike, which at a certain stage is pinched off to check upward growth and to make the lower leaves spread out.

The crops known to the people as *kangni*, *china*, and *swank*, are little grown being looked upon as inferior grains only to be resorted to as food when all else fails. Nor is *mandwa* (here known as *maddal*) a favourite crop. Arains and Muhammadan Jats grow it in the Ajnala Hithar, but the meal makes a coarse black bread, which is regarded as a poor kind of food requiring a strong digestion. The only other *kharif* crop that may be mentioned is *mirch* or chillies. It is grown near the city, and also by Arains in Ajnala in the Sakki villages. The neighbourhood of Saurian is known to grow good *mirch*, not because the soil or conditions of the tract are especially favourable, but because Arains hold a number of villages there, and the raising of crops requiring much manure and careful tillage and giving a large money return has an attraction for them. The seed pods are picked by the women (the process causing much irritation to the hands) and are then dried in the sun.

Nomenclature
of crops.

17. The English, Indian and scientific names
of the more important crops are shown below :

S. No.	English	Indian	Scientific
1.	Wheat.	Kanak.	<i>Triticum sativum</i> .
2.	Barley.	Jauu.	<i>Hordeum vulgare</i> .
3.	Oats.	Javi.	<i>Avena sativa</i> .
4.	Rice.	Jhona.	<i>Oryza sativa</i> .
5.	Sugarcane.	Kamad.	<i>Saccharum officinarum</i> .
6.	Maize.	Makki.	<i>Zea mays</i>
7.	Sorghum.	Jowar, Chari,	<i>Audropogon sorghum</i> .
8.	Bulrush Millet.	Bajra.	<i>Pennisetum typhoideum</i> .
9.	Italian Millet.	Kangai.	<i>Setaria ita.ica</i> .
10.	Little millet.	Swank.	<i>Panicum colonum</i> .
11.	Finger millet.	Mandal.	<i>Eleusine coracana</i> .
12.	Common millet	China	<i>Panicum miliaceum</i> .
13.	Gram.	Chhole or Chana.	<i>Cicer arietinum</i> .
14.	Mung bean.	Mung.	<i>Phaseolus mungo</i> .
15.	Mash bean.	Mash.	<i>Phaseolus radiatus</i> .
16.	Dew gram.	Moth	<i>Phaseolus aconitifolius</i> .
17.	Lentils.	Masar.	<i>Lens esculenta</i> .
18.	Cotton.	(Desi Kapas. ((Narma Kapas.	Gossypium indicum and other indigenous types. Gossypium hirsutum.
19.	San hemp.	San.	<i>Crotalaria juncea</i> .
20.	Deccan hemp.	Sankukra.	<i>Hibiscus cannabinus</i> .
21.	Rape.	Sarson.	<i>Brassica campestris</i> Var. Sarson.
22.	Indian rape.	Toria.	<i>Brassica napus</i> Var. dichotoma.
23.	Sesamum.	Til.	<i>Sesamum indicum</i> .
24.	Linseed.	Alsi.	<i>Linum usitatissimum</i> .
25.	Lucerne.	Lusan.	<i>Medicago sativa</i> .
26.	Persian clover.	Shaftal.	<i>Trifolium resupinatum</i> .

Serial No.	English	Indian	Scientific
07.	Egyptian clover.	Berseem.	<i>Trifolium alexandrinum</i> ,
28.	Melilot or Indian clover.	Senji.	<i>Melilotus parviflora</i> .
29.	Tobacco.	Tambaku.	<i>Nicotiana tabacum</i> .
30.	Chillies.	Lal Mirch.	<i>Capsicum annum</i> .
31.	Onion.	Piaz.	<i>Allium cepa</i> .
32.	Garlic.	Lasan.	<i>Allium sativum</i> .
33.	Poppy.	Post.	<i>Papaver somniferum</i> .
34.	Potato.	Alu.	<i>Solanum tuberosum</i> .
35.	Brinjal.	Baingan.	<i>Solanum melongena</i> .
36.	Melon.	Kharbuza.	<i>Cucumis melo</i> .
37.	Water melon.	Tarbuz.	<i>Citrullus vulgaris</i> .
38.	Carrot.	Gajar.	<i>Daucus carota</i> .
39.	Radish.	Muli.	<i>Raphanus sativus</i> .
40.	Turnip.	Shalgam.	<i>Brassica rapa</i> .

18. During the last 20 years marked changes have taken place in all directions. More wells have been sunk and equipped with better type of persian wheels. Better and improved types of crops have taken the place of the low yielding and indigenous types. Improved implements are used to kill weeds and to get better tilth of soil. Cattle of better type are seen replacing the old type. The introduction of better types of fodder has resulted in increasing the yield of milk in cattle. Large quantities of milk are brought into the city from long distances. A very successful and paying work is done by the grafting of the wild ber trees in the district. Agriculturists who got nothing from their groves of ber trees, have begun to make an income of Rs. 30/- to Rs. 100/- an acre annually. The old gur boiling furnaces are being replaced by the improved furnaces. Wells are being bored. Sowing wheat by broadcasting is being replaced by Kera, por or drills. Fodder has become a money

Changes in
agricultural
system.

crop and in the vicinity of Amritsar displaces crops like sugarcane, wheat and cotton.

19. Advances under the Land Improvement Loans Act are as a rule properly applied to the improvements for which they were obtained but a good deal of difficulty is experienced in several cases for recovery of principal and interest when they fall due. There has however been a considerable improvement in the position under both Acts as the following tables show :

Land Improvement Loans Act (XIX of 1883).

Year.	Balance outstanding at the commencement of the year.	Amount advanced during the year.	Recoveries.		Balance at close of year.
			Principal.	Interest.	
1933-34	81216	7190	12736	3797	76370
1934-35	76370	6500	18375	5507	64495
1935-36	64495	8000	15494	4604	57001
1936-37	57001	2000	15074	4799	43927
1937-38	43927	2700	14190	4177	32437
1938-39	32427	3500	10658	3020	25279

Agriculturists' Loans Act (XII of 1884)

1933-34	51683	5730	14806	1815	42607
1934-35	42607	2390	34741	4219	10256
1935-36	10256	4990	5755	811	9491
1936-37	9491	6180	4848	581	10823
1937-38	10823	1900	7901	444	4822
1938-39	4822	1000	2656	254	3166

20. The Co operative movement was initiated in Amritsar District in the year 1908. The work was started with a single Honorary Sub-Inspector. The Agricultural Credit Society was the first to come in the field. The district was given a separate Inspector for the first time in 1920 after which expansion really

Agricultural banks and the Cooperative movement generally.

AMRITSAR DISTRICT]

[SECTION A.

began. The following table shows the different kinds of societies now in existence and the extent to which each type has developed :—

Serial No.	Kind.	Societies.	Members.	Working capital (in Lakhs).
1.	Central Credit.	6	870	36.96
2.	Central Non-credft.	4	547	...
3.	Agricultural Credit.	627	21809	40.93
4.	Consolidation of holdings.	21	2021	...
5.	Cattle Breeding.	66	1184	...
6.	Non-Agricultural Credit.	85	3147	3.65
7.	Thrift and Savings.			
	(a) men	66	1287	3.18
	(b) women	41	904	1.10
8.	Better Living (Dehat Sudhar).	45	2639	...
9.	Supply and Store.	2	716	...
10.	Compulsory Education.	11	610	...
11.	House Building.	1	13	...
12.	Society for Promoting Economic Knowledge.	1	27	...
	Total ...	976	35774	86 (round)

Besides these there are 16 unregistered school supply societies with 2351 members.

Of the six Central Credit institutions which undertake to finance the primary Credit Societies in the District, the Amritsar Central Co-operative Bank is the biggest having 572 members (individuals and primary societies) and Rs. 25.68 lakhs working capital. The other five are credit unions having 298 members (all societies) and Rs. 11.28 laks as working capital. These 5 unions have their headquarters at Tarn Taran, Vachhoa, Rendewali, Chetapur and Butala and restrict their financial operations to limited areas around them.

The four Central non-credit societies comprise three Execution of Awards Unions and one Cattle Breeding Association. The former are meant to facilitate the execution of awards of primary societies and the latter to assist the operation of the Cattle Breeding Societies of the district.

The agricultural Credit Societies which form the bulk of the co-operative activities of the district have touched about 65% of the villages considered suitable for a society. Taking an average family as five persons and each member representing one family the Agricultural Credit Societies have touched nearly 22000 families so far. Society owned funds in the form of shares and reserve form 44% of the total working capital and if members' own savings form about 58% of the working capital and the saving per member come to 108/- against an average loan of Rs. 170/- per member. These societies hold non-members' deposits to the extent of Rs. 2.32 lakhs and owe debts to central financing institutions in the neighbourhood of Rs. 19.1 lakhs. They transact business of about Rs. 22 0 lakhs and issue loans to the extent of Rs. 4 lakhs and recover about the same in principal each year. Their annual net profit is about Rs. one lakh. A good number of societies have established themselves as banking centres for the villagers. They attract local capital and finance the village on very reasonable terms.

The non-agricultural credit societies are chiefly in towns and among the non-agricultural classes of the rural areas. 21 of them having 1113 members and working capital of Rs. 1.47 lakhs are purely Urban Societies under a special urban staff, designed to improve the economic condition of the urban classes, specially the shopkeepers and the traders. In addition to simple credit business they undertake different banking operations like the commercial bank under certain restrictions. They are mostly self-dependent credit institutions in the matter of finance.

Among non-credit activities the following deserve special mention:—

(i) *Consolidation of Holdings*

Work on co-operative principles was taken up about 1928 but was abandoned after five years, unsuccessful trial. It was restarted in the year 1935-36 and received a special stimulus in the year 1938-39 on the appointment of a separate Inspector with 8 sub-inspectors for the entire District. So far consolidation has been done in 21 villages and 13211 acres of land have been reportioned. The figures for 1938-39 show 5925 acres consolidated, comprising 6166 blocks before consolidation, reduced to 818 blocks effecting a remarkable reduction of 87% in the number and increasing the area per block from 0.9 acres to 7.2 acres. The societies reserve sites for schools and for other public institutions. In order to facilitate approach to all fields, they construct new paths and approach roads. The Amritsar Central Co-operative Bank has created a development fund of Rs. 12000/- chiefly to promote the cause of consolidation work in the district and is employing 2 sub-inspectors for this work. Members contribute towards consolidation fund at the rate of -/5/- per acre. This scheme besides being immediately beneficial to the cultivators, is now very popular, in the whole district and what is now needed is more staff to meet the growing need of the people.

(ii) Cattle Breeding Scheme is a special feature of the Co-operative movement of the district. The object is to improve the breed and quality of cattle of all kind to provide better and more economical cattle for draught and milk purposes and also to encourage subsidiary cattle industry of the District. There are 66 societies, having 1824 cattle of improved quality, of which only 33% are imported from outside and the rest have been bred locally. The Haryana breed which is good for draught and milk purposes alike is being popularised. These societies have devised various appliances and methods to accomplish the difficult programme. The District Board is taking particular interest to promote the cause of this scheme financially and in other ways. 9 animals belonging to these societies were sent to All India Cattle Show Delhi held in February 1939 and three animals won prizes.

(iii) There are 45 Better Living Societies mostly confined to Amritsar and Tarn Taran tahsils. Government has sanctioned 3 sub-inspectors for this scheme. These societies are serving as the basis and the most effective non-official agency on purely democratic lines to accomplish the most difficult programme of the village reconstruction movement. Through this agency commendable results have been achieved in villages in respect of sanitation, social and moral improvement and in the revival of the old indigenous village institutions.

(iv) Thrift and savings societies which form the direct method to inculcate the habit of thrift number 107 with 2191 members and Rs. 4.28 lakhs savings of members in the form of contributions and deposits. Savings per member is Rs. 200/-. These societies are mostly among the low paid employees in schools and offices. 41 of them with 904 members and Rs. 1.1 lakh savings are exclusively among women. The women's societies in addition to practising thrift for their members who are all women or their children, indulge in training their members in domestic science and for this occasional short classes are held by the sub-inspectressess.

The movement in the district is in the charge of an Assistant Registrar having 6 Government paid Inspectors and 37 sub-inspectors paid by Government Punjab Co-operative Union and other non-official agencies.

21. As the following table shows less land has been sold but more mortgaged since last settlement than in the proceeding 20 years:

Alienation and
land values.

Tahsil	Sales since Settlement						Mortgages with possession now existing					
	To agriculturists			To non-agriculturists			To agriculturists			To non-agriculturists		
	Area in acres.	Average price in Rs. per acre.	All	Area in acres.	Average price in Rs. per acre.	All	Area in acres.	Average consideration in Rs. per acre.	All	Area in acres.	Average consideration in Rs. per acre.	
Tarn Taran	6,757	540	...	1,521	607	8,278	79,377	378	...	84,808	373	...
Amritsar	9,832	485	...	2,260	524	12,092	59,559	347	...	63,910	346	...
Ajnala	6,934	350	...	1,169	418	8,103	40,728	304	...	48,270	295	...
Total district	23,523	461	...	4,950	524	28,473	1,79,664	351	...	1,96,988	345	...
Last settlement	...	201	...	...	273	...	...	130	...	...	144	...
Percentage of cultivated area { now	3.2	...	...	.7	...	3.9	24.5	...	...	26.9	...	...
last settlement	3.1	...	...	1.3	...	4.4	13.0	...	...	17.4	...	...

Non-agriculturists play a less prominent part, both absolutely and relatively, as alienees than they did at last settlement. Traditionally this should be regarded with stisfaction but too much emphasis should not be laid on it as a sign of strength, for the statutory agriculturist can be just as exacting as the non-agriculturist creditor and has advantage of the law's support in securing his pound of flesh. It is however satisfactory that the greater part of the alienated land has remained in the hands of land-owners of the village in which it lies. They are in a position to pay a close approximation to the value of the land, but are unable to compete with non-agriculturists who (now as at last settlement) are willing to pay highly for a permanent transfer though now as then they allow less than an agriculturist does for a mortgage. Purchase is much the more attractive proposition in their case and, as much of the debt extinguished by transfer of land is the luxuriant fruit of usury springing from a meagre root of capital, the generosity of the price is in part nothing more than a voluntary reduction of unconscionable profit. On average a mortgage fetches 73 per cent of the market value of land ; but one can get a point more (74 per cent) on the 91 per cent of the mortgaged area in the hands of agriculturist alienees and only 60 per cent of its value on the other 9 per cent which non-agriculturists hold.

Land values as brought out in mortgages were everywhere declining in the decade immediately preceding settlement though they are still in every part of the district above the figures reached at last settlement. The decline started five year later in the case of sales and there were some signs of a recovery at the time of settlement operations.

The total secured debt of the rural part of the district is Rs. 6.79 crores—Rs. 3.16 crores in Tarn Taran tahsil, Rs. 2.21 crores in Amritsar and Rs. 1.42 crores in Ajnala. Without any addition for unsecured debt and co-operative credit this amounts to a burden of Rs. 345 per mortgaged acre, Rs. 93 on every cultivated acre in the district and Rs. 8 per head of population. There is no adequate return for this burden. To quote from

Mr. Macfaquhar's Tarn Taran report : "sale is merely the last, and by no means the strongest, link in the chain of the small farmer's financial servitude. The bond in which his first debt is acknowledged (often as a sum exceeding what he has received in hard cash) ; the web of interest, revaluation of capital, and further interest, in which the years entangle him; the mortgage which is the tangible admission that his personal credit is no longer good and that his land must come on to the scales—all these bind him, his sons, and his grandsons, to toil for others' profit. The tragedy is the futility of so much of the spending leading to debt: litigation and ostentatious matrimony have broken many a home, while productive debt is too rare to be even refreshing.

Recent agrarian legislation will doubtless operate to restrict the farmer's credit at first and later to change its channels. Its course is not an issue in this settlement, but the reactions of the various elements in the rural community are of some importance. The forty years which the law gives as a suitable span for the life of a settlement, may be little more than an economic day in this rural reconstruction and the assessment must take account of the growing pains of the new era. The golden age may come but for the moment the ousting of the barren years has bred nothing better than uncertainty. The non agriculturist feels himself outlawed, seeks no fresh commitments, and hopes to unload as much of his cargo of credit as he can. Some even of the few agriculturists who have money in their pockets for investment are shy, uncertain where the law will strike next. The term of this uncertainty will depend on the future course of legislation, but however short it may be there will be many years of transition to follow, and the new assessment must anticipate that the major part of its life will be years of some economic uncertainty and must allow for their inevitable and possibly harsh adjustments."

22. The district has reserves of capital and income which the assessment does not touch. There are nearly 7,500 civil and military pensioners who receive over twelve lakhs of rupees annually from the State. Remitt-

Miscellaneous
Income.

ances from relatives abroad must amount to a very substantial sum. Colony grants (other than military awards) have been given to the extent of a thousand squares since last settlement and the bulk of them have gone to small farmers. From their own resources the people have been able to purchase outside the Province something like 34,000 acres of land valued at nearly half a crore of rupees

23 Four branches of the Upper Bari Doab Canal run through the district: the Sobroan, the Kasur, and the Lahore Branches and the Main Branch Lower and 39 per cent of total cultivated area of the district is canal irrigated. Tarn Taran tahsil derives the greatest benefit from this source, 55 per cent of its cultivated area being returned as *nahri*. In Amritsar the figure is 29 and in Ajnala 26 per cent. The original project for the canal was drawn up in 1850, shortly after annexation. Some modifications of the original design were found to be necessary, and a revised estimate was submitted in 1856. The canal was formally opened in 1859, and irrigation commenced in the following year. The head works are situated on the river Ravi near Madhopur, in the Gurdaspur District. Considerable engineering difficulties were here encountered, owing to the Chakki and other hill torrents and natural drainage lines crossing or approaching near the line of the canal, but these were successfully surmounted. The canal runs in one channel for thirty miles, after which it splits up into two principal channels called the Main Branch Upper and the Kasur Branch Upper. The latter, seven miles further on, bifurcates into the Sobroan Branch and the Kasur Branch Lower, both of which pass through the Amritsar District. From the former irrigation is supplied to the country between the high bank of the Beas and the Patti drainage and from the latter to the tract lying between the Kasur and Patti drainages. At Aliwal in the Batala tahsil of Gurdaspur District the Lahore Branch takes off the Main Branch Upper. Below this point the main branch is known as the Main Branch Lower and serves the country between the Kasur, and the Hudiana drainages. It crosses the Grand Trunk Road within three miles of Amritsar city. The Lahore branch traverses the southern border of the Ajnala tahsil and irrigates the tract

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between the Hudiana and the Sakki Nalas. It gives perennial irrigation to 171 estates—16 in Tarn Taran tahsil, 23 in Amritsar and 132 in Ajnala. the Main Branches give perennial irrigation to 102 estates in Tarn Taran tahsil and 103 in Amritsar ; *Kharif* irrigation to 21 estates in Amritsar 17 in Ajnala ; and a mixture in 14 Amritsar estates. The Kasur Branch gives perennial irrigation to 74 Tarn Taran estates, *Kharif* supplies to 14 Tarn Taran and 11 Amritsar estates, and a mixed supply to 6 Tarn Taran and one Amritsar estate. The Sobraon Branch gives perennial supplies to 110 Tarn Taran and 3 Amritsar estates, and a mixed supply to 6 Tarn Taran and one Amritsar estate. The Sobraon Branch gives perennial supply to 110 Tarn Taran and 3 Amritsar estates, *Karif* supplies to 33 Tarn Taran and 73 Amritsar estates, and a mixed supply to 9 Tarn Taran and 7 Amritsar estates. Some villages are fed by more than one Branch and so appear twice above but the ultimate result is that 22 Tarn Taran, 139 Amritsar and 198 Ajnala estates get no canal water at all.

The number of distributaries taking off from each of these branches and irrigating within the Amritsar District, is :

Sobraon Branch 14 ; Kasur Branch 9 ; Lahore Branch 10 ; main Branch Lower 11. Of the 11 distributaries from the Main Branch Lower, three are in the Majitha Division and eight in the Raiwind Division. Fatehgarh Distributary, taking off just above Aliwal from the Main Branch Upper, also irrigates the Amritsar District.

Inspection Rest Houses are provided at the following places, the distances given against each being in miles from the point at which the branch enters the district : —

Sobraon Branch.				Miles.
Gaggarbhana	...	...	...	3
Raya	...	...	...	9
Khwaspur	...	...	...	22
Dilawalpur	...	...	...	29
Khara	...	—	....	35

Sobraon Branch (contd)

Dhota (on the Bhindar distributary)	---	...	20
Naushahra (on the Patti distributry)	...	...	32

Kasur Branch.

Bhoewal	...	---	...	...
Jandiala	...	...	---	...	12
Rasulpur	...	---	..	...	27
Jaura	....	...	...	...	33

Main Branch Upper and distributaries.

Jaintipur	...	..	...	...	1
Dhing Nangal	—	...	...	...	1

Main Branch Lower.

Kathunangal	...	—	...	...	7
Ibban	...	...	...	...	22
Bhuchar	...	...	...	...	32

and on distributaries.

Amritsar	...	...	...	...	18
Doburji	..	...	...	...	17
Lalu Ghuman	...	...	...	...	25
Kasel	...	...	....	...	28
Museh	...	...	—	...	32

Lahore Branch.

Majjupur	...	...	...	---	7
Ranewali	.	...	...	...	13
Kohali	...	...	...	...	21
<i>and on distributaries.</i>					
Ugar Aulakh	...	—	—	...	16
Lopoki	---	..	...	..	24

Each of the four branches is bridged at intervals of about four miles, and good cart-roads are maintained along the outer boundary of the spoil bank. Several flour-mills have been built at various points on the canal, where a fall provides the necessary water-power. These are, as a rule, worked by *panchakkis* or water-wheels. There are mills at Ranewali and

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Kohali on the Lahore Branch ; at Raya and Nagoki on the Sobaraon Branch, at Bhuchar on the Main Branch Lower; and at Pakhoki, Allahdinpur and Jaura on the Kasur Branch; while at Tarsik, which is also on the Kasur Branch, there is an oil-crushing factory, worked by water-power from the fall there. This factory is not working now.

For administrative purposes the canal is worked in four divisions, each under an Executive Engineer. The Gurdaspur Division has its headquarters at Gurdaspur and includes the whole of the Main Canal from Madhopur to Tibri and the Main Branch Upper from Tibri to Aliwal. The headquarters of the Majitha, Raiwind and Jandiala Divisions are at Amritsar. In the Majitha Division are the Lahore Branch and that portion of the Main Branch Lower, which lies between Aliwal and the Grand Trunk Road. The Raiwind Division comprises all the Main Branch Lower South of Grand Trunk Road, and the Jandiala Division the whole of the Kasur and Sobraon Branches. The office of the Superintending Engineer, to whom the Executive Engineers are subordinate, is also at Amritsar. The Central Canal Workshops which are reckoned as a Division, are also situated at Amritsar. These workshops do work not only for the Irrigation Department of the Punjab, but for other Departments, both in the province and outside it, and for private persons also.

In the gazetteer of 1893, the opinion was recorded that canal irrigation in Amritsar was not capable of extension. This idea had been entirely falsified even by last settlement and the following table shows that there has been no retrogression since.

Year	Acres Irrigated.		
	Kharif	Rabi	Total
Quinquennium ending 1891—92	79483	114993	194476
Quinquennium ending 1912—13	156433	189583	346016
Quinquennium ending 1938—39	211611	206450	418061

Information about charges for canal water will be found in Chapter III-C.

24. The well apparatus is always of the well-known Persian wheel type, except in some of the shallow unlined wells in the Beas and Ravi riverain areas, where the bucket lift or *dhinkl* is used. The Persian wheel may be roughly described as a string of tin buckets (or less frequently now, earthen pots) placed, one above the other, on a continuous chain hung over the water on a broad vertical wheel. The buckets reach a short way below the level of the water, and as the wheel worked by oxen revolves, the buckets on one side come up full, and empty themselves into a trough whence the water flows out into the surface irrigation channel, while the buckets on the other side go down empty. The apparatus of cogged wheels is known as the *cha^hla chob*, or *jora*, the well itself as *ku*, and the chain as a *mahl*. A double well is known as *d hat'a*, or *doharta*, or *domahla*. The method by which the water is raised in a leather bag, or *charsa*, at the end of a rope, working over a pulley or *vidh* is not known in Amritsar.

Four or five pairs of bullocks are required to work a well continuously for 24 hours, and at least two men, one of whom drives the bullocks, while the other directs the water into the *kia^hris* or compartments, made by small ridges of earth for convenience of irrigation. Three or four bighas can be watered in this way in 24 hours, but the area will vary according to the depth from which the water has to be raised, the distance of the field from the well, the slope, and the nature of the soil to be irrigated. The apparatus costs from Rs. 125/- to Rs. 160/- if of iron as it now commonly is. Buckets require replacement after three or four years. The rest of the apparatus lasts for many years if properly oiled and maintained.

Each shareholder works the well in turn, one turn being generally eight *pahrs* (twentyfour hours). The order is determined by agreement and a shareholder has to take up his turn at whatever time of day and night it falls, unless he effects an exchange. Many of the double wells have only been started in order to provide more frequent turns, for it may happen that the shares are so numerous that a man's turn comes round after so long

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an interval, or lasts for so short a time, that it does him little good. This leads to the secession of some among the shares, and the rigging up of a second wheel.

25. The importance of properly organised markets needs no emphasis. The cultivator obtains a much better price for his stock when he disposes of it in a market than when he sells it in a village. Well-regulated markets create in the mind of the cultivator a feeling of confidence and of receiving fair play. The cattlefairs held in this District fulfil this purpose. The total number of these fairs held in Amritsar District in the year 1936-37 was 11, including the two (the Dewali and the Bisakhi) fairs held by Municipal Committee, Amritsar.

The following abstract of particulars regarding Cattle Fairs during the year 1936-37, will show the importance of properly organised cattle trade in the Amritsar District :—

	No. of cattle fairs held.	Total No. of stock present.							
		Bulls.	Bulls.	Cows.	Young stock.	Buffaloes	Camels.	Others.	
(a) Amritsar District Board,	9	200	2530	4630	2165	14650	192	252	Rs. 8419/-
(b) Amritsar Municipal Committee.	2			Record not kept.					Rs. 33189/-

The increase in the cattle Fairs has provided additional markets to the cultivator. As these fares are distributed all over the three Tehsils, the facilities for marketing have improved to a very large degree. Transportation is an integral part of marketing, and good markets are of little help to the cultivator unless he can transport his stock to them cheaply and promptly. The increase in the fairs have cut down long journeyes, and the cost of transportation.

26. Amritsar is essentially an importing district for cattle, particularly the bullocks. A number of cows are also imported but their demand is limited. The bullocks are brought from the Haryana tract, the, Malwa tract and the Phulkian States to the Dewali and Bisakhi Cattle Fairs, through the agency of the dealers. These animals are mostly absorbed in the Tarn Taran and Amritsar Tehsils. They are of the Haryana breed.

The cultivators of the Ajnala Tehsil prefer the bullocks of Dhanni from the North Western Districts of the Punjab. These animals are of small size, consume less fodder and are very hardy. They suit the barani land of this Tehsil where the fodder is also very scarce. The dealers from the Dhanni tract do a flourishing trade with this Tehsil at the time of the Dewali and Baisakhi fairs, Amritsar and the Gullushah fair, Sialkot District.

Some fairs of Haryana tract are also visited by the zamindars of Amritsar District for the purchase of bullocks. The cattle fairs of Jahaz-garh, Rohtak and Bhawani are very popular with the cultivators of this District. The Jaito Cattle Fair in the Nabha State also attracts a large number of stock purchasers from this district.

The camels are now playing an important part in the agricultural operations of some parts of this District. The demand for these animals on the lands under Chahi cultivation remains unabated. They are imported from the Malwa tract, the Phulkian States, and the Rohtak District. These animals fetch good prices at the Amritsar Dewali and Bisakhi cattle fairs every year and their sale is always very brisk.

Hundreds of buffaloes are reared in this district. So the demand for this animal from outside is small. The good milch buffaloes brought to the cattle fairs by the dealers in this District from the Malwa and the Nili-bar Colonies change hands with the urban population only. The buffaloes bred in this district are also not exported except the deteriorated worthless stock which is offered for sale at the time of the cattle fairs. This useless stock

is purchased by the Pathans of the Campbellpore District who drive them to the Northern Districts of the Punjab and the North Western Frontier Province where they are offered for sale in weekly mandis or cattle fairs.

27. In Amritsar District, since the onset of the economic depression, in the year 1930-31, there has been almost every-where a quest for dual purpose cattle, the breed of which the bullock would be suitable for draught and the cow for milk and ghi production.

The standard
and number of
live stock im-
proved.
(a) cattle.

The desire for such a breed is laudable in this District as the cultivators are more or less accustomed to feed milch cows in production to their yield of milk. So heavy milking strains of the Haryana breed particularly suit this District, and the breed is recognised as having dual purpose value.

Until recently, the single purpose in this District was to breed Haryana cattle of a good draught type. With the separation of the draught and the dual purpose Haryana herds at the Government Cattle Farm, Hissar, in the year 1928, the bulls suitable for milk production are now being issued to this district. As a result of these breeding operations, it is not uncommon now to come across a number of cows which are good milkers with yields of 3000 to 4000 lbs lactation.

The Royal Commission on Agriculture in India has laid down that a dual purpose animal obtained, by selection, from a breed in which strains combining good milking with good draught qualities have long existed, may be regarded as being relatively pure bred in respect of both qualities. The production of such pure bred animals of Haryana breed is the object aimed at in the Amritsar District.

As to the number of cattle improved, it is very difficult to ascertain at present. But it is beyond doubt that the following stock in the hands of 50 Co-operative Cattle Breeding Societies in Amritsar District at the close of the year 1936-37 has undergone a note worthy improvement :—

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Stud Bulls	28
Cows	816
Female young stock	243
Male young stock	159
Total	<hr/> 1346

Besides these, hundreds of improved cattle are now to be seen in the hands of the zamindars, which are not the members of these Cooperative Cattle Breeding Societies. No record of their number is kept. All this improvement that has taken place in the cattle of this District, is the result of the combined efforts of the Civil Veterinary Department, Co-operative Department and the District Board, Amritsar. The latter body and the Co-operative Department have been the financiers providing money for the purchase of pedigree bulls, cows and the heifers. The Civil Veterinary Breeding Operations, assisted in the formation of cattle Breeding Societies, brought about the protection of animals from the contagious diseases and always rendered Veterinary Aid systematically and energetically. The weeding of the scrub bulls and the unwanted male-stock by castration has always been an important part of the duties of the Civil Veterinary Department. In the year 1936—37 alone, 12203 castrations were performed against 11749 in the preceding year.

The private enterprise for the improvement of cattle in this district is also not lacking. The members of the Co-operative Cattle Breeding Societies have evinced real interest in stock breeding by borrowing money from the Co-operative Banks, on reduced interest, and have utilized this money for the importing of pedigree heifers and cows for breeding purposes. At the close of the year 1937-38, there were 28 bulls which are maintained by the Co-operative Societies with an additional small subsidy of Rs. 5/- from the District Board, Amritsar, (in the case of 17 bulls only), per mensem per Society.

There were 190 pedigree bulls working on 1-4-1938 but this number is far short of the required strength of the District. The Civil Veterinary Department is aiming at providing a bull for every 100 cows: When this is achieved, the progress in the

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improvement of the cattle breeding of the District will be accelerated.

It may also be added here that the Department's policy is the production of good cattle and ruthless culling of the weeding animals. The latter class is still in over-whelming majority in in this District, particularly in the Ajnala Tehsil

28. The need for greater attention to buffalo breeding in the Amritsar District has been felt for a long time. Consequently a process of "Selection" is now also applied to buffaloes in their breeding. The object aimed at is the increase in the productiveness of the she-buffalo and the maintenance of its sound constitution. As a result of these operations, there is now a relatively good milk yield in the local breed and the production of milk fat is also comparatively high. The best buffalo stock is now to be seen in the Tarn Taran Tehsil. Throughout the District the buffalo is carefully tended by the women of the household. The cultivator himself, though he keeps no milk records is well aware of the quantity of milk and ghi produced by the buffalo, and when specially good specimens exist in a village there is a waiting list for the female calves that may be to spare. The cultivators are most careful to mate their buffalo-cows with selected bulls. The District Board, Amritsar also provides pedigree buffalo-bulls in the District out of its own funds. At the close of the year 1936—37, the number of District Board buffalo bulls working in the Amritsar District was 18 besides 239 privately owned registered approved local bred buffalo-bulls. The District Board bulls are kept at stud and the keeper is authorised to charge a covering fee, though it is insufficient to meet the cost of maintenance.

In order to achieve better results the system of formation of Societies around each bull has been introduced by the Department. At the close of the year 1937-38, the number of such Societies was 52 with 2086 registered buffalo-cows and 959 members.

29. At present the farmer keeps too much stock for his needs not only over-stocking his land but also depleting his fodder resources. This is the state of affairs in all the Tehsils but Ajnala is worst. If agriculture is to progress rapidly, this over-stocking should be avoided and this District will have to follow the course of progress advocated by Dr. Wright, namely the feeding on farms of crops to live-stock and the sale of such live-stock products and the animals themselves, rather than concentration solely upon crops—in other words, mixed farming. This is particularly the case in the irrigated areas. In the United Provinces at Agra, although the area under cash crops, such as cotton, grain and sugar-cane have been cut down, there has been a higher production of these crops, while it has also been possible to raise leguminous fodder crops for the proper feeding of cattle which give milk and ghi in addition to crops. The development of such mixed farming is a very promising line of advance in the Amritsar District. Another essential to progress is that there should be better organised marketing for live-stock, milk and milk products together with propaganda for the better feeding of the female calves, specially of the working breeds. By better marketing the cattle breeder would receive a higher share of what the purchaser paid. This is not the case now a days.

For every 10 acres of land the adequate strength of stock for farming and family requirements should consist of three bullocks, one buffalo-cow and one cow. The bullocks will carry on the farming two by working in plough and the third by acting as a relief while the buffalo-cow and the cow will meet the family requirements by the production of milk, ghi etc. besides manure. The cow will also prove a source of profit to the cultivator by producing the stock for agricultural purposes. The buffalo-cow will give a better return to the cultivator than the cow by producing more milk and ghi over and above his requirements bringing him an additional income.

The usual area cultivated by a pair of bullocks in the

Amritsar District is from 10—12 acres and this suffices for the tillage of land down in any year.

The extra stock is necessary on chahi-holdings. No doubt the plough cattle can do the well work also but their services must be supplemented with some extra stock. The cultivator having 10 acres of Chahi land will require two extra pairs of bullocks to work on the Chahi-holdings. This additional stock will not be an extra burden on the cultivator as the return from the land under Chahi irrigation will be greater and this stock will also help in the transport of the agricultural produce to the markets.

30 The initial cost of each type of animal of reasonably good class to a cultivator in the Amritsar District is as follows :—

Cow	Rs. 130/-
Bullock	Rs. 190/-
Buffalo-cow	Rs. 170/-
Buffalo-bull	Rs. 90/-
He-camel	Rs. 125/-
She-Camel	Rs. 110/-
Horse	Rs. 115/-
Mare	Rs. 115/-

The above cost is calculated on the value of the roughage grown or collected by the cultivator and of the concentrated ration such as mother's milk, grain etc. If nothing is allowed for the roughage grown or collected by the cultivator, and a price is attached only to concentrated foods, such as mother's milk, grain and oil cake, the out lay per animal of reasonably good class is estimated to range from nothing at all to the following sums :—

Cow	Rs. 40/-
Bullock	Rs. 60/-
Buffalo-Cow	Rs. 50/-
Buffalo-Bull	Rs. 30/-
He Camel	Rs. 80/-
She-camel	Rs. 40/-
Horse	Rs. 75/-
Mare	Rs. 75/-

The buffalo-bulls and he and she camels are generally not reared in this District. The initial cost in the case of females of all classes of animals has been calculated from the day of birth to the day of calving after attaining maturity. In the case of males, the initial cost given above is for the period from the day of birth to the day they are broken for agricultural purposes.

31. The average life of each Type of animal in this District is as follows :—

Average Life.

Cow	12 years
Bullock	10 years
Buffalo-Cow	11 years
Buffalo-Bull	9 years
He-Camel	12 years
She-Camel	12 years
Horse	14 years
Mare	14 years

32. The Civil Veterinary Department has obtained an account of the way in which the average cultivator feeds his cattle, and an estimate of what this costs him. But there are good many variations which occur in practice; more-over it is not difficult to estimate the price to be attached to the concentrated foods used, for whether grown or purchased, these have a readily ascertainable market value. It is other-wise with the roughage and the bulky fodders. In some cases to the actual cost of feeding, we have added 20 percent of the value of the cattle for interest and depreciation. The cost also varies in the case of the land worked by the owner with hired labour, and those on partnership system or on the Batai system. So the following estimates fairly represent the cost of keeping a pair of bullocks in reasonably good working condition for a year under different system.

Annual cost of maintenance.

(A) On the Batai System.	Rs. 170/- to Rs. 240/-
(B) On the partnership system	Rs. 300/- to Rs. 338/-
(C) Worked by the owner with hired labour	Rs. 250/- to Rs. 290/-

In the case of (b), the high cost of maintenance is largely attributable to the work demand from the cattle. The usual area cultivated by a pair of bullocks in the Amritsar District is from 10 to 12 acres, and in this case it is nearly 20. This is particularly the case in the Tarn Tarn and Amritsar Tehsils. In Ajnala Tehsil, where the cattle are of poor quality and the feeding is inferior, the cost of maintaining a pair of bullocks on the Batai system varies from Rs. 92/- to Rs. 145/-

It may also be added here that in the Tarn Taran and Amritsar Tehsils the cattle are in regular work from 7 to 8 months in a year while in the Ajnala Tehsil they have to work for about half the year.

In the case of the dry cow it would be true to say that, if there is any fodder available after the draught cattle are fed, she gets it, or shares it with the young stock, for the rest she is left to find food where she can. Where the cow provides some milk for the house-hold, as well as her calf, cultivators try and spare her 2-3 lbs of cotton seed and bran, or oil, cake or pulse; but when her milk fails, the ration is withdrawn, and she is turned adrift to find a living for herself on grazings.

In the case of the she-buffalo, her treatment is very different from that of the cow. She is carefully tended while in milk and for every 4 lbs of milk she gets a concentrated ration of 1 lb. But when she gets dry, the concentrates are withdrawn and she is left to maintain herself partly on grazing and partly on surplus dry fodder. Usually her lactation period extends to 10 months followed by a dry period of four months only. So an average buffalo cow giving 10 seers of milk per diem with a total lactation yield of 4200 lbs, will give the cultivator a net profit of Rs. 80-90 for every 14 months on the calculation that the money realised on the income side will be Rs. 190/- and the maintenance charges Rs. 100/- approximately.

The male buffalo shares the fate, so far as management goes, of the ox tribe. In-deed his position may be worse. He may be allowed to die a natural death from starvation or may be sold at birth. In some cases he may survive and take his chance on the common pastures.

33. The normal years yield plenty of fodder. In the months from April to June, the cattle are fed on wheat and barley, dry straws and gram seeds, the new straw of the rabi coming in by the first of these three months. In July and August there is good grass in the waste lands and on the fallows. So the cattle are grazed on this grass. In September and October green fodder in the form of Jowar alone or mixed with Moth or other buck wheat is given. From November to the beginning of March, the dry stalks of Jowar, maize etc. are given and if necessary wheat or barley in the form of missa bhusa. In the month of March, animals are sometimes fed on Metha, Senji, turnips, shatala etc and green wheat or barley is also given. This however is an exception for the milch cattle and not the rule. So the wheat and the barley straws in the summer and Jowar and Maize stalks in the winter form the principal cattle fodder. Turnips are only used in the Bet ilaqa.

From the above it is apparent that August to November is the best time for the cattle in the whole of the year and April to June the worst time for them. Speaking generally, chaff, grass, Jowar, Senji, Shatala, Bajra and the crushed stalks of sugarcane are the principal fodders of the District.

This is an urgent need for popularising the fodder conservation among the cultivators. During the two or three months, immediately preceding the monsoons, there is no fresh fodder or herbage available for cattle. So the animals have to subsist, during this period, on inadequate supplies of coarse fodder. If the cultivation of green fodder crops is to be extended, it will be necessary to convert part of the produce into a form in which it can be stored for use during the leave months. This point was recognised by the Royal Commission of Agriculture in India, who stressed the value of silage making as a suitable means of conservation. But little or no progress has been made in this direction in the Amritsar District.

34. The total out-put of milk is quite adequate in terms of the requirements of the rural population. But the tendency of the cultivator is to sell as much of his products as possible for cash, even if this

Milk animals
per family.

entails a shortage of essential nutrients in his own diet and that of his family. For the villages in the vicinity of towns, the market is relatively lucrative and sales of milk provide a valuable addition to the cultivator's income. But with the cultivator whose holding is remote from the market, the sale of milk can be profitable. Such a cultivator utilises all his milk for the production of ghee. This is also advantageous, as in addition to selling the ghee for cash, he retains the Lassi (butter-milk) for the use of himself and his family.

Thus the sale of milk or ghee cannot be an indication of poverty or of surplus milk.

The milk or ghee is not produced generally for home consumption. The cultivator only retains the lassi (Butter-milk which forms an essential part of his diet. Consequently it has been found that the consumption of milk and milk products is markedly lower in the rural areas of Amritsar District. It has been estimated that the average daily per caput consumption in terms of milk in this District is 5 oz. This food is derived from the Lassi (Butter-milk), which is left as a by-product of the manufacture of ghee and is a most popular beverage. But in addition 0.5 oz. of Ghee is also taken. The total milk equivalent would thus be just 14 oz. per head per day in this District.

The importance of the buffaloes as the chief milk producing stock in this District can be rightly stressed. She is very popular, as her average milk yield is markedly higher than that of the village cow, the butter fat content of her milk is also higher than that of the cow, while she appears to possess a remarkable ability to convert coarse fodders into milk. Consequently the buffaloes have far out-numbered the cows in this District.

35. The improvement of cattle is a slow and difficult business and the more definite the aim, the greater

Progress in the
breeding of good
stock.

are the chances of success. As already stated a process of selection is now applied to cows in the Tarn Taran and Amritsar Tehsils, and in these cows, measures to improve the milking qualities are very desirable. The type of cow likely to suit the average cultivator in these Tehsils

would be one capable of rearing a strong calf and of supplying in addition some 1000 to 1500 lbs of milk per lactation, for household use. The cows of this kind, there is no doubt, are beginning to be seen in fairly good numbers in these two tehsils. As cattle are responsive to selective methods to a very large extent, the introduction of pedigree bulls of Haryana breed of milking strains are much more likely to give satisfaction. But the present bull strength of the district viz-190 is far short of our requirements and unless it is brought to 1 bull for every 100 cows, rapid strides in the breeding of good stock are out of question.

In the Ajnala Tehsil, the existing cows can with difficulty rear their calves, the bullocks are of very poor quality, and the fodder is so scarce that cows capable of rearing good calves and providing any considerable surplus could not be expected to thrive. The improvement of cattle in such conditions is most difficult, and in these circumstances, it seems that desirable though it be, to secure a surplus of milk for the cultivator himself, the first step should be the production of cows that will make useful draught bullocks. So this is the object aimed at and for this purpose grading of the herds is going on though at a very slow pace. In addition to this a resort to buffaloes is receiving a careful consideration in this Tehsil.

In all villages in which efforts to distribute good bulls are in progress, attention is being given to the elimination of worthless males. These inferior animals are of two kinds. The first and least numerous, but the most difficult to deal with, is the animal known as the "Brahmini Bull". The second type is the young animal that at a later stage will be castrated and used for draught, or in some cases may be so used without castration.

The Brahmini bulls, when ever found are removed to the cattle pounds. More-over, the bye-laws framed by the District Board, Amritsar under Sections 56 and 57 of the District Boards Act, 1883, have had a very salutary effect as far as these worthless dedicated animals are concerned. They are now no longer a source of hindrance to cattle improvement. On the other hand strong effort is also being made to restore the former practice of dedicating good bulls only.

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[SECTION A.

The second type of bulls is constantly being emasculated in castration campaigns. These castrations are performed in the very early age of the animals.

The following castrations were effected in this District in the years 1935—36 to 1937—38.

Year.	Number of castrations effected.
1935—35.	11749.
1936—37.	12203.
1937—38.	13656.

It is agreed that the working capital of the cultivator is mainly represented by his live-stock. It is equally indisputable that the annual losses from disease are very heavy and that these press hardly on the cultivator who may have to pay Rs. 100/- to Rs. 150/- to replace a good bullock and Rs. 50/- to Rs. 200/- to replace a good cow or she-buffalo which has been killed by disease. The following were the number of deaths ascertained through the Patwaris in the Amritsar District :—

1935—36.	1373.
1936—37.	1230.
1937—38,	937.

Even the above figures are very far from revealing the true state of affairs as the notification of deaths from cattle diseases has not been made compulsory by legislature. Moreover, the loss by death is only a small part of the loss the cultivator suffers. The principal contagious diseases are the Rinderpest, Haemorrhagic Septicaemia, and Foot and Mouth disease. Haemorrhagic Septicaemia is a very fatal disease. The percentage of death from Rinderpest is also very high; fifty percent mortality is not uncommon, but the remaining 50% are also enfeebled for life by this disease. Similarly in the case of Foot and Mouth Disease, for one animal that dies, ninety-nine may be temporarily incapacitated. It will be thus evident that epidemic diseases cause great direct injury to the cultivators through the death of his cattle and also entail extensive indirect losses through the illness of his working or milking stock. There must also often be indirect losses from the

imperfect cultivation of crops when working animals are stricken by diseases.

The success achieved in stamping out these diseases in the Amritsar District is an admitted fact. The methods of protection are now very largely and effectively used. The following figures will give an idea of the extent to which these methods are now employed :—

Year.	Name of the disease.	No. of outbreaks reported.	No. of outbreaks attended.	No. of animals inoculated or vaccinated.
1935-36	Haemorrhagic Septicaemia ...	80	80	22201
	Rinderpest ...	36	36	8780
1936-37	Haemorrhagic Septicaemia ...	153	153	36706
	Rinderpest ..	22	22	7821
1937-38	Haemorrhagic Septicaemia ...	84	84	17210
	Rinderpest ...	64	64	10360

The cost of inoculations and vaccinations is a charge on the Provincial Government. No contributions are made in this direction by the local bodies or the cultivators.

For the whole of Amritsar District, there are in Civil employ 17 Veterinary Assistants and one Deputy Superintendent. They are all available for the control and treatment of diseases in addition to the work of live-stock improvement entrusted to them. The Veterinary Assistants in-charge of dispensaries and the itinerating Veterinary Assistants are also called upon by live stock-owner to treat ordinary non-contagious diseases and to dress wounds and to share in castration campaigns.

The existing dispensaries are located at different places and their number in each Tehsil is as follows :—

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Amritsar.	6
Ajnala.	3

They are all accessible to and are patronised by ordinary cultivators free of charge.

Besides these dispensaries, the Veterinary aid has also been provided in the remote parts by the opening of permanent out-lying dispensaries in-charge of trained compounders or ordinary out-lying dispensaries which are attended by the Veterinary Assistants personally once or twice a fortnight. The following figures indicate how far the Veterinary aid has been made use of by the cultivators in this District :—

Year.	Name of Tehsil.	No. of Veterinary Hospitals.	No. of permanent Out-lying dispensaries.	No. of ordinary Out-lying dispensaries.	No. of cases treated.		Castrations performed.	
					In dispensaries.	On tour.	In dispensaries.	On tour.
1935—36	Tarn Taran ...	4	3	11	22048	3519	2652	1306
	Amritsar. ...	5	3	14	40809	7073	3846	930
	Ajnala ...	3	1	9	14978	3382	2246	769
1936—37	Tarn Taran ...	4	3	11	28272	4019	2987	1106
	Amritsar ...	5	3	14	48952	7773	4480	830
	Ajnala ...	3	1	9	17859	3762	2148	652
1937—38	Tarn Taran ...	4	3	14	29773	3119	3261	1079
	Amritsar ...	6	2	16	50135	6873	5472	827
	Ajnala ...	3	1	11	17486	2887	2392	625

The cost of medicines, instruments and other hospital equipments is a charge on the District Board, Amritsar. A Veterinary Hospital at Amritsar is being financed by the

Municipal Committee, Amritsar, in addition to a permanent out lying dispensary at the Chati-wind Gate.

In order to protect the animal life in the rural areas far from the Veterinary Hospitals and dispensaries, a scheme of self help was brought about with the mutual help of the Civil Veterinary Department and the Co-operative Department. Under this scheme, popular centres where successful Co-operative Credit Societies existed and could afford to subscribe out of their common good fund or profit towards the expenses of few Veterinary appliances and medicines of common use, were selected to provide 1st. Veterinary aid to the sick animals.

At least 3 intelligent men from each of these societies were picked up by the Co-operative Department for a short course of 2 weeks training in the use of the Veterinary instruments and the medicines and the necessary training was imparted to them by the Veterinary Department to be able to act as First Aiders in their own and neighbouring villages. The number of such centres in the Amritsar District at the close of the year 1936-37, was 40. All these centres are doing good work and the zamindars have taken to realize the necessity of early attendance to the sick animals and to keep the live-stock on the proper lines.

37. In November 1924, the Government of India decided to abandon all Imperial horse, mule and donkey breeding operations in the Amritsar area, comprising the civil districts of Lahore, Amritsar and Ferozepore. This resulted in the formation of a Co-operative Society for continuing those operations by private co-operative efforts of the people interested in the Industry. The society was accordingly formed in the year 1925 under the name of Lahore, Amritsar and Ferozepore Horse, Pony and Mule Breeding Society. It began functioning from 1st March 1926 when the Imperial Horse and donkey stallions with stables and premises in the Amritsar area were transferred from the Army Remount Department to the society.

The present strength of Society's horse and donkey stallions standing in the Amritsar District is 4 and 2 respec-

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tively. They are located at Amritsar, Tarn Taran and Ajnala. Mares fit for breeding are branded "C.P.S." after they have been examined by a Veterinary Inspector of the Society. Such mares are covered by society stallions on payment of Rs. 3/- as covering fee. The number of branded mares has fallen down from 764 in the year 1911-12 to 422 in the year 1938-39. This decrease is partly due to the levy of a branding fee of Rs. 5/- which is recovered from the owners of mares before branding and partly on account of the availability of District Board stallions for covering of unbranded mares. The total number of mares covered by horse and donkey stallions in the year 1937-38 was 221 and 103 and their produce was 70 and 25 respectively. The local horse dealers of the district are to a great extent responsible for draining the district of many of its best mares. Besides motor vehicles in recent years have adversely affected the horse breeding industry of the district.

The society is keeping 3 donkey stallions in the district in addition to other donkeys which are maintained by the District Board. Each donkey is allowed to cover a maximum number of 160 mares in a year. The mule breeding industry to which at one time there was a certain amount of religious prejudice has in recent years attracted the attention of the public because even a most degenerate pony mare is capable of producing a good mule if she is served by a pedigree donkey stallion. To those who cannot afford to purchase or maintain mares for horse and pony breeding, mule breeding is a source of considerable profit. A good 12 months old mule, the price of which is about Rs. 100/- often brings the lucky breeder double or even treble the value of the mare from which it is foaled. Mules are generally used by their owners to carry heavy loads at an extremely tender age, they get as much value for their money as possible out of the mule for 3 or 4 years and then sell them again.

RENTS, WAGES AND PRICES.**SECTION B**

There is a ready explanation for the paradox that in an admittedly congested district of smallholders, only 46·6 percent of the landowners cultivate their own land. The district is undoubtedly a tract of small cultivating owners but the land they cultivate is not always their own. The person who pays the revenue on land does not always own it and the owner may sometimes not be regarded as such for statistical purposes even when cultivating his own land. A mortgagee, particularly a non-agriculturist will often put the mortgaging owner back on the land as his tenant. Statistically the mortgagee is then regarded as the owner, the owner as a tenant, and the land goes to swell the area held in tenancy. There are other cases where owners exchange land for facility in farming without going so far as a formal transfer of ownership; and in such cases each appears statistically as the tenant of the other. But basically, Amrstsar is a district of crofters with a proprietary interest in the soil.

Privileged tenants occupy 8·6 percent of the cultivated area—8·6 percent in occupancy right and 2 percent in less permanent forms of indulgence inspired by kinship of financial bondage or even some shadow of proprietary titles.

Commercial rents are taken on 44·8 percent of the land : grain on 33·2 and cash on 11·6 per cent. Cash rents have been falling out of favour for many years. The grain rent has of course the great merit of flexibility and automatically adjusts the burden of a bad harvest or low agricultural prices; that is, of course, where it is taken as an agreed share of the crop (batai). This is the common form of grain rent. A fixed maundage per acre (chakota) is much less popular.

2. Over a period of fifty years. there has been a consistant decline in the area cultivated by owners 57·3 per cent at the third regular settlement, 50·7 per cent at least settlement, and 47·5 per cent now. It is

Tarn Taran
Tenancies

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curious that this should be so with an increasing number of landowners and a sinking area. One causative factor may be the increase in the mortgaged area on which for statistical purposes mortgagees in possession are shown as owners and mortgaging owners, who are sometimes kept on the land as cultivators, are shown as tenants.

The area cultivated by occupancy tenants shows a slight reduction in all circles, probably owing to the normal effect of escheat.

Tenants-at-will paying commercial rents occupy almost as much land as owners themselves. These tenants are not a class apart in the community. In the majority of cases they are small owners who gladly take a few extra acres on rent from the bigger men. In a congested village there will not be a single alien tenant and few villages go further than their neighbours to find tenants. Landless menials are also in the market, so that the owner continues to hold the advantage over the tenant. The following statement shows on what terms he prefers to let his land :—

Circle	Percentage Of Cultivated Area Under Tenants-At-Will					
	Paying in kind			Paying Cash		
	Third regular settlement	Last Settlement	Now	Third Regular Settlement	Last Settlement	Now
Upper Manjha	13.3	24.3	35	19.3	17.3	11.1
Central Manjha	13.9	24.7	32.4	16.5	13.7	10.7
Bet Bangar	16.8	27.7	38	13.5	9.2	7.1
Tahsil	13.9	24.8	34	17.3	14.8	10.5

Rents in kind, which fifty years ago were less popular than cash rents, have now established themselves as the favourite

letting system, and have gone ahead considerably since last settlement. They have of course the advantage of certainty of return on irrigated soils, where serious failure of crops is improbable. They have the further advantage of conforming more readily than cash rents to variations in agricultural prices. On a rising market they immediately give the land-owner his share of the increment, while cash rents tend to lag behind a rise in agricultural prices. On a falling market, a grain rent easier to collect. Cash rents are most favoured on unirrigated soils, on which they give a certainty of return, which seasonal variations deny to grain rents.

The favourite rate of *batai* on nahri land is half of the produce, the owner paying the land revenue and half of the occupier's rates. The same rate prevails on unirrigated lands. On wells it differs according to the strength of the well and the soil. The average rate of *batai* on each class of soil in each circle is :

Circle.	Class of Land			
	Chahi	Nahri	Sailab	Barani.
Upper Manjha	43	48	48	45
Central Manjha	40	43	—	47
Bet Bangar	39	49	48	49
Tahsil	42	48	48	46

At last settlement, an average rate of *batai* without reference to the class of soil was considered sufficient, but I have preferred to give each class of soil its own letting value in the produce estimate for which these average rates will be used.

Fixed grain rents have increased their popularity since last settlement along with the general tendency to take rents in kind. They vary considerably from village to village not only in rates but in the basic crop, which take generally wheat may be berrera or another rabi cereal, and sometimes even a kharif crop such as rice.

3. The highest proportion of cultivating owners is naturally found among those who pay least revenue, but only 49 per cent of those who pay fifty rupees or less as land revenue every year in this tahsil have any khud-kasht land in their holdings. Only 49.9 per cent of the cultivated area is farmed by owners in this tahsil. Both these figures would seem to dispose effectively of the common contention that assessment should be based on the profits of a cultivating owner and not on rents, a proposition that is supported on the ground that ninety per cent of the owners in this district cultivate their lands themselves. The tahsil is undoubtedly a tract of small cultivating owners but the land they cultivate is not always their own and this explains the apparent contradiction between accurate statistics and known facts. The person who pays the revenue on land does not always own it and the owner may sometimes be not regarded as such for statistical purposes even when he is cultivating his own land. For instance a mortgagee, particularly if he is a non-agriculturist, will often put the mortgaging owner back on the land as his tenant. Statistically the mortgagee is then regarded as the owner, the owner as a tenant and the land goes to swell the area held in tenancy. There are other cases where owners exchange land for facilities in farming without going to the length of transfer of ownership and in such cases also each appears statistically as the tenant of the other. But even if it were to be conceded that assessment be based on the cultivating owner's profits and not on landlord's rents I do not see that the landowner stands to gain anything. So long as agricultural rents give the tenant a margin of subsistence, an assessment based on them must favour the owner for his return from a tenancy is always less than that from his own farming.

The claim that a fair wage for the owner and members of his family whose labour assists him in cultivation should be included in the costs of cultivation to be deducted from the gross assets is met under the present system by the deduction for the tenant's share of the crop which feeds, clothes and

maintains the labour employed on the land. Owners as such now farm slightly more of the cultivated area than they did at last settlement—46·7 per cent then and 47·9 per cent now. This feature is common to all circles and the change has been most pronounced in the small Mirankot circle. Only in the Bet Bangar is the area more than half (53·5 per cent) and it is lowest in the Nahri circle at 42·9 per cent.

Occupancy tenants with 7·7 per cent of the cultivated area in their hands hold practically the same position as they did at last settlement. The usual contract is the payment of revenue plus small seigniorial due (Malikana) calculated as a fraction of the revenue.

The following table shows on what terms owners prefer to let their lands:—

Circle.	Percentage Of Cultivated Area Under Tenants-At-Will					
	Paying in kind.			Paying Cash		
	Third regular Settlement	Last Settlement	Now	Third Regular Settlement	Last Settlement	Now
Bet Bangar	6·5	16·8	26·9	19·2		
Jandiala	9·3	16·9	25·8	22·8		
Nahri	15·9	23·7	32·2	20·9		
Mirankot	15·4	22·9	32·7	22·5		
Tahsil	11	19	28·8	21·7	23·4	

In 1890 two-thirds of the commercial rents were cash rents. At last settlement when the area cultivated by owners showed a considerable decline both classes of rent advanced in importance but cash rents had relatively lost ground and were little more than half of the commercial rents. The area on commercial rents now is not much more than it was then but rents in kind are twice as popular as cash rents and it may be added from experience in the field that cash rents are still on the

wane. They are more difficult to collect in times of agricultural stress and preferred by owners where the return from the land is least assured. With the improved security which increased irrigation brings there is more profit for the owner in a grain rent, and there is never any difficulty about collection. In Jandiala circle where chahi land is most valuable it is least given to tenants and a cash rent is taken on little more than a quarter of the rental area. Similarly in the Bet Bangar where the labour of working deep wells gives the non-perennial canal supplies greater value owners farm three-quarters of the nahri land themselves and only about 37 percent of the rented land is on cash rents.

The average rates of Batai are shown as percentages in the following table :—

Circle.	Class of Land				
	Chahi.	Nahri	Sailab	Barani	Abi
Bet Bangar	45	42	49	42	43
Jandiala	45	48	...	46	46
Nahri	49	49	...	48	49
Mirankot	42	48	...	39	42
Tahsil	46	47	49	44	46

At first sight it is surprising that owners should take a greater share of the produce of wells in the Nahri circle than in the Jandiala circle where many wells are better. But in the Jandiala circle (and in the Bet Bangar circle where the same rates of Batai is taken) the tenant supplies his own seed while in the Nahri circle the owner generally pays some part of the cost. The Nahri rates in the Jandiala and Mirankot circles are based on comparatively small areas and their scarcity value puts them almost in par with the Nahri circle despite the disadvantages of non-perennial supply in one case and poor soil in the other. The sailab rate is based on rents on 97 acres only.

In the two eastern circles the average rate of batai is the same as it was at last settlement and in the other two

where more is taken Mirankot shows the greater increase. But it will be noticed that the rates in this circle other than on the small nahri area are much lower than those prevalent elsewhere in the tahsil and this does suggest that rents are economic and graded according to the quality of the land.

As in Tarn Taran tahsil tenants are not far to seek. Such land as other smallowners or landless menials of the village cannot till easily finds a market in neighbouring villages. The only important alien community (and they can scarcely be called aliens now) is purbias in estates in the vicinity of Kathunangal. Their ancestors came here as labourers when the Upper Bari Doab Canal was under construction eighty years ago and stayed on as tenants in some of the sardars' estates.

4. Although the average owner in this tahsil has less land than owners in the rest of the district he does not farm so much of it himself. 47.5 per cent of the cultivated area in Tarn Taran and 47.9 per cent in Amritsar tahsil are cultivated by owners; in Ajnala it is only 42.6 per cent. At the third regular settlement Ajnala owners farmed half of their land and at last settlement 44.4 per cent. The decline now recorded may be in great measure statistical. Owners in the Uthar have lost little and owners in the Nahri circles show the greatest losses in cultivating ownership. It is true that in the Sailab circle owners still farm much more of the land than they do elsewhere in the tahsil but theirs is also a much steeper loss (from 50 per cent to 45 per cent) between the settlements.

The natural course of events is slowly reducing the acreage of occupancy tenancies which now burden 6.5 per cent of the cultivated area. Other privileged tenants find concessions hard to obtain for they now occupy not much more than half the area they did at last settlement.

The following table shows that in this tahsil as in the rest of the district grain rents have gradually acquired predominance among commercial rents :—

Circle		Percentage of cultivated area under Tenants-at-will.				
		Paying in kind.			Paying Cash.	
		Third reg. settlement.	Last settlement	Now	Third reg. settlement.	Last settlement.
Sailab	...	25.5	29.5	39.1	10.3	6.4
Hithar	...	21.8	28	37.6	15.7	12.4
Uthar	...	22.9	30.9	40.4	15.9	15.2
Udhri	...	24.5	32.4	38	16.4	15.6
Tahsil	...	23.7	30.6	39	14.8	13.2

Cash rents have never been as popular in Ajnala as in the other tahsils. In a tract where the return from much of the produce is certain and where a hand to mouth existence makes it undesirable to have many commitments in cash this is natural enough. It is significant that on unirrigated land where owners favour a contract which assures them of a regular return cash rents are even less taken than they are on irrigated land. This is easily understood in the case of sailab land where the river's caprice has a much wider field for destruction than the Beas and there is very little disposition even to be committed to a fixed grain rent (chakota). This uncertainty of agricultural profit is a sufficient compulsion in the case of sailab land, while poverty is equally potent in the case of barani rents.

Landowners in the Sailab and Hithar circles where wells are the only important source of regular irrigation prefer to farm the chahi land themselves while in the other two circles where the canal brings additional ease to life wells are more readily leased to tenants.

The following table shows as percentages how much of the crop the owner takes; *batai* rents.

Circle	Class of Land.				
	Cham	Nahri	Abi	Sailab	Barani
Sailab	48	44	48	49	50
Hithar	48	44	48	48	49
Uthar	49	49	47	50	49
Nahri	48	50	50	...	46
Tahsil	48	49	48	49	49

There is a considerable degree of uniformity throughout each class of land from circle to circle. Nahri irrigation in the Sailab circle is unimportant and unrepresentative and in the Hithar circle comes from the Kiran inundation canal and not from the Upper Bari Doab Canal.

Outside the Nahri circle cash rents have never had a strong hold in this tahsil and are particularly rare in the Sailab circle owing to poverty of soil and vicissitude of season.

5 On nahri land he is sometimes willing to accept a cash payment, as though possibly less profitable than Urban Wages. a share of the produce it relieves him of all responsibility for the canal charges and saves him from contact with a second set of officials. Rents are always stated in terms of rupees to the bigha and vary from about Rs. 14 per acre for the best nahri fields and Rs. 5 per acre for inferior barani. The rise in cash rents during the past twenty years has been very remarkable, particularly in Tarn Taran, where it is calculated that the advance has been one of 36 per cent; the figures for Amritsar and Ajnala are 39 and 25 per cent respectively. An account of the various methods employed to calculate this rise will be found in paragraph 36 of the Ajnala Assessment Report. So long as there is any chance of the tenant paying up, it is unusual for the landlord to remit any part of a cash rent in bad seasons. It is only on valuable lands, or where the landlord's holding is very large, that written agreements are made. As a rule, the contract is an oral one.

Skilled labour earns from Rs. 1/- to Rs. 1/4/- a day, unskilled six to eight annas.

6. In all villages members of the menial and artizan classes are found, who perform certain services for the landowners, and receive in return a certain share of the produce of each harvest. It is impossible to state with accuracy what each of these receives, for the usage varies from village to village, and depends much on the generosity of the individual landlord, on the willingness of the individual menial and to some extent on the character of the harvest. Where the custom is to give the menials a certain number of sheaves of wheat, or a stated weight of grain, some approach to accuracy is possible, but in other cases the dues are entered in the village record as taking the form of a percentage of the grain harvested.

7. The law allows a deduction to be made on account of the wages or customary dues paid to artisans or menials whose products or labour are utilised for the purposes of cultivation and harvesting. The village menials include the lohar, tarkhan, odawa, lawa, jhoka, chori, chuhra athri, chuhra sepi, muchi, mehra, hajam, barwala, dhobi, teli and mirasi. All of these are generally paid in grain according to our records, but a deduction cannot legitimately be made on account of all of them.

In some cases it is obvious that the menial does not come within the letter of the law. The mehra or saqqa, who carries water; the muchi, who repairs shoes; the hajam or nai, who is a barber in Hindu and Muslim villages and a messenger elsewhere; the dhoobi or chhimba who is the village laundryman; the barwala, who is a handy-man doing watch and ward, making arrangements for parties, and carrying messages; and the mirasi, who in a developed district like Amritsar has lost his old functions of court-jester and genealogist and now does much the same work as the barwala, are not engaged in work subsidiary to agriculture. In one or two other cases the distinction is a little less clear but I am satisfied that they should not be included. These are the teli, the chuhra sepi, and the chuhra athri. The teli has a spurious connection with agriculture. He extracts the oil required for household purposes, stands

mattresses with cotton, and fluffs cotton intended for local handlooms. The extraction of oil is not one of his duties to the village, and is the subject of separate contract with the person requiring this done. In any case it is not an agricultural operation for the farmer's oilseeds are ready for market before extraction of oil. It is also obvious that the other two operations, for which he receives a customary due, have nothing to do with the cultivation or harvesting of the cotton crop. The chuhra sepi is a house-and-stable-servant, who has nothing to do with the field work. He may be employed on occasion to winnow the grain or keep the fire under the gur-furnace alight, but he is paid separately for these duties in addition to his customary dues as chuhra sepi, and these special payments are included in my agricultural expenses. The other menial, whom I have omitted and who was included at last settlement, is the chuhra athri. He is a general servant, whose duties do include agricultural operations, but who is paid for his agricultural labour as a private servant of the person employing him and not as a general labourer. He has no place in the expenses of a holding rented on batai for the landowner does not employ him on his tenant's fields.

The artisans and menials on whose account deductions have to be made are, therefore, the lohar, tarkhan, odawa, jhoka, lawa and choni. These are all paid from the common heap of grain before division between landlord and tenant the lohar for his maintenance or repair of iron implements, the tarkhan for the same attention to the wooden implements, the odawa for winnowing the grain, the jhoka for keeping the fire going under the gur-furnace, the lawa for reaping the grain (generally the spring crops, but sometimes also rice), and the choni for picking cotton.

8. I have made a careful enquiry into local practice to determine the value of this labour and the conclusions which follow are based on that enquiry. Custom does not vary sufficiently from circle to circle to make calculations at different rates necessary. But this does not mean that the percentage of cost will necessarily be the same in each circle for the same rates are being applied

Menials dues-
Tarn Taran
Tahsil.

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to different cropping practices. For the lohar and tarkhan together it was found that the value of the deduction was Rs. 10-10-9 per plough. The payments to other menials are expressed in percentages of crops—5 per cent of the wheat and berrera to the odawa, $2\frac{1}{2}$ per cent of the wheat, berrera and rice to the lawa, 5 per cent of the gur to the jhoka, and 10 per cent of the cotton to the choni. When these percentages were converted into a plough value they amounted to Rs. 26-10-11 in the Upper Manjha, Rs. 26-11-0 in the Central Manjha, and Rs. 19-15-5 in the Bet Bangar. Converted to percentages of the gross assets of each circle, the plough-values were found to be 6.6 per cent in the Upper Manjha, 6.5 per cent in the Central Manjha, and 6.8 per cent in the Bet Bangar circle.

I consider that a deduction of 8 per cent for all circles will be equitable. This is sufficiently more than the result of my calculations to include a liberal allowance for unrecognised concessions which owners may occasionally make to their menials. The rate of deduction will be the same on all classes of soil.

There is no tendency to evade payment of customary dues in the case of genuine agriculture labour for which a charge has been made in my estimate of net assets, for such labour is able to secure its rights through its scarcity-value. In the case of the other menials discussed above, it is probable that, with the exception of the chuhra athri and chuhra sepi, the payments recorded by us are in many cases only paper payments, although the landowners insist on their being recorded, presumably under the impression that such item will be included in the expenses of cultivation. Mercenary labour is not yet a feature of the country-side, and in the case of batai arrangements is altogether absent. This is natural where holdings are small and the areas on batai are generally taken by small owners to supplement their proprietary earnings. Cash payments may be found in the case of large owners on their own cultivation, and in a few acres of market gardens near Tarn Taran town; but neither of these cases affects this produce estimate.

9. I have studied the practice of typical estates in each

Menials' dues-
Amritsar
Tahsil.

circle to reach my estimate of the cost of agricultural labour. There is so little difference of practice that it has been possible to use the same rates of deduction throughout the tahsil. I have allowed the lohar thirty kacha seers of maize, five seers of gur and five seers of cotton in the autumn harvest and three sheaves (bharia) plus twenty kacha seers of wheat in the spring harvest. A bhari is $1\frac{1}{2}$ kacha maunds with equal weight of grain and straw. The tarkhan receives the same as the lohar from the autumn crops and half a bhari less from the spring crops. These are plough-values which converted into cash at commutation prices amount to Rs. 10-11-5 per plough for these two artisans together. The gross value for the circle is found by multiplying this plough-value by the number of ploughs in each circle. Other menials are paid a percentage of the crop—5 per cent of the wheat and berrera to the udawa; $2\frac{1}{2}$ per cent of the wheat, berrera and rice to the lawa (I have assumed that his labour is required for a quarter of the crop); $2\frac{1}{2}$ percent of the gur to the jhoka; and 10 per cent of the cotton to the choni. These payments with the payments to the smith and the carpenter swallow 69 per cent of the gross produce in the Bet Bangar circle, 7 per cent in Jandiala, 6 per cent in the Nahri circle and 6.6 per cent, in Mirankot. It will be fair to allow a margin for variations from practice and for irregular concessions made by owners to their menials. To cover the contingencies I have made my deduction for menials' dues at the rate of eight per cent in all circles and on every class of soil. I have no reason to suppose that agricultural menials are unable to secure their customary share of the crops.

10. I have studied the practice of typical estates in each circle and come to the conclusion that the following allowances will be appropriate. In the autumn harvest the lohar should have a kacha mound of maize, $2\frac{1}{2}$ seers of gur per plough. This holds for all circles except the Sailab where less maize is given—fifteen seers will be enough. In the spring harvest the lohar receives two sheaves (bharia) plus ten seers of wheat in the Sailab and Hithar circles and half a bhari more in the Uthar and Nahri circles. The carpenter gets

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Ajnala Tahsil

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the same as the smith from the autumn crops and half a bhari less from the spring crops. The other menials are paid a percentage of the crop—5 per cent of the wheat and berrera to the udawa; $2\frac{1}{2}$ per cent of of the wheat and berrera (and of rice as well in the Uthar and Nahri circles) to the lawa; 5 per cent of the gur in three circles and $6\frac{1}{2}$ per cent in the Sailab to the jhoka; and 10 per cent of the cotton to the choni. These payments swallow 7·6 per cent of the gross produce in the Sailab circle, 7·4 per cent in the Hithar circle, 6·6 per cent in the Uthar circle and 6 per cent in the Nahri circle. Some margin should be allowed for variations from normal practice and for casual concessions occasionally made by owners. I have therefore made my deduction from the gross value of the produce at the rate of 9 per cent in the riverain circles and 8 per cent in the Uthar and Nahri circles.

11. A careful enquiry into the current prices of the district was made at the commencement of Settlement operations and the subject was fully discussed in a report made to the Financial Commissioner from which material for this paragraph has been extracted.

Prices

The rule on commutation prices calls for the gift of prophecy as it requires them to be the average prices which are likely to be obtained for their crops by agriculturists during the coming settlement; but qualifies this by directing that they shall be based on the average of a sufficiently long period in the past, and that it shall be assumed that the range of future will not be dissimilar. Prices prevailing in years of famine or severe scarcity have to be excluded from the calculation. The period used as the basis of my proposals was the whole period of the expiring settlement. This seemed expedient not only on account of the wording of the rule, but because of the difficulty in a period of such amazing fluctuations of prices to make a selection of a few years without unfairness to the state or to the landowners. The years of the post-war boom and the current slump have both been included.

Three further points arise from the rule—the determination of the periods to be taken as those in which agriculturists

ordinarily dispose of their produce, the deduction to be allowed for cost of transport and marketing charges, and the source to be used for determining what prices prevailed. On the first of these matters, the orders of Government are that the following periods shall be taken.

Gur	— 15th December to 28th February.
Rice	... 1st October to 30th November.
Cotton	... 15th September to 31st Dec.
Other Kharif crops	... 1st December to 31st January.
Tobacco	— 1st July to 31st August.
Toria	— 15th December to 31st Jan.
Other rabi crops	— 15th June to 15th August.

On a full consideration of all the material which could affect a decision on the second point, I came to the conclusion that it would be fair to allow a deduction of five annas a maund in the case of all crops except cotton for which I allowed ten annas a maund.

The use of sources was a more difficult matter. Village shopkeepers' books were defective in not being continuous for any one shop, in covering small transactions only, and in a general unreliability. Harvest prices published in the gazette are of little value, as they represent transactions between shopkeepers and not between agriculturists and markets. For market prices, the available sources included not only shops, but grain exchanges, factories, firms, and banks. Of these sources the only one of any value was the accounts of Messrs. Balli brothers for wheat, gram, toria and til. The two states in the district which had been under the superintendence of the court of wards take cash rents. Of the large proprietors consulted, only two supplied accounts of any value. The source on which reliance had ultimately to be placed was the harvest prices for each assessment circle reported by the field kanungos for entry in the circle notebooks. No other record was so complete or afforded such a wide field of comparison of prices in each year. The Financial Commissioner, with the approval of Government, sanctioned the adoption of the following commutation prices : —

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Kharif crops. In annas per maund.

Rice	—	47
Bajra	—	44
Maize	—	45
Moth	...	60
Other pulses	—	70
Oilseeds (principally til)		110
Gur	—	88
Cotton	...	130

Rabi crops:

Wheat	—	55
Wheat straw	...	6
Barley	...	36
Gram	—	50
Mixed wheat and gram (berrera)		52
Oil seeds (principally toria)		58

FLAT RATES.

Crop.	Sailab & Hithar circles of Ajnala tahsil.	Urban and Suburban circles.	All other circles.
	Rs. per acre.	Rs. per acre.	Rs. per acre.
Tobacco ...	60	60	60
Kharif fodders—			
Irrigated ...	18	40	25
Unirrigated ...	12	25	15
Rabi fodders—			
Irrigated ...	22	40	20
Unirrigated ...	15	25	15
Fruit, vegetables and spices.	30	100	50

12. Sir Henry Craik has discussed in detail the method of disposal of surplus produce by Zamindars in para 10 of his settlement report. There has been some change. It has been found that most of the village banias have left the villages and migrated to towns and big cities, owing to political reasons, and the surplus produce of the

Sale of Produce

Zamindars is not generally sold to them. In the Ajnala tahsil the effect of political changes seem to be milder. Only petty transactions are made with the village banias and in some cases small quantities of grain are bartered with shopkeepers, and oil, spices, gur, cloth etc. are taken in exchange. The present practice is :—

- (i) To sell produce to the village Kumhars, who carry it on pack animals to the mandi or the mill owners on the canal. The Kumhars generally buy grain etc. from the Zamindars and fix the price and take it to the mandi and derive the profit of a middleman. In some cases the margin of profit left to the kumhars (when they make their own transactions) is very little, and does not in most of the cases, exceed even the cost of the carriage which they ordinarily charge.
- (ii) In some cases the grain is also carried to the mandi on bullock carts, *Rehrus* (a cart drawn by one horse) or on pack animals by Kumhar and others on behalf of the Zamindars and sold in the market, and the cost of carriage etc. is borne by the Zamindars. The octroi duty and other charges of the mandi are also debited to the accounts of the Zamindars in such cases. As pointed out by Sir Henry Craik, no accounts are kept by the Zamindars or the Kumhars. The Practice of selling the commodities on the Bohal (threshing floor) direct to the banias still exist in the district.
- (iii) The petty traders and in some cases agents of big traders and mill owners visit the village and buy the grain lying on the threshing floor. In case the bargains are struck the *Dharwai* (village Weighman) weighs the grain and delivery of the goods is made on the spot.
- (iv) In very few cases the Zamindars give their produce to the Sahukars towards the payment of their debts now. The prices fixed for the transactions

made in the village are those which are ordinarily prevalent in the mandis less the cost of carriage, Octroi and other *arhat* charges plus a little margin for middleman's profit.

The sahu-kars of the district do not determine and fix prices (known as bha Bhanna) now, as is done in some other districts at harvest times.

The sahu-kars have lost their hold on the Zamindars now. The new Debtors Act and the appointment of the Debt Conciliation Board, and other political changes are responsible for the changes to some extent. It is however true that some Zamindars who are above an average Zamindar and who do Sahukara work themselves also store the stock and wait for better prices. Most of the big landlords of the district lease out their lands on cash rent. The grains grown on the *Khud Kasht* land and that received in batai can hardly meet the requirements of their home consumption.

13. The standard of comfort has risen considerably of recent years. Some years ago [the ordinary cultivator was content to wear clothes made of unbleached cotton woven by the village weavers, but he now almost invariably wears one or more garments of machine made fabric. Well-to-do Zamindars wear thick woollen coats in the winter and have replaced the common double folded cotton wraps by the wollen lois (blankets). Ornaments such as are worn by the women of the district and were generally made of silver are now made of gold in large quantities. Steel trunks, brass lamps and enamelled vessels are now found in almost every house, and in richer zamindars houses are tables, chairs and even clocks and gramophones. But, though better furnished, there has not been much improvement in the sanitation and ventilation of the houses. Taking the district as a whole the advance in the standard of living has hardly kept pace with the advance in the wealth of the people, which is much greater than is indicated by their dress, houses and house-hold furniture. The amount of income which the Amritsar Jat obtains from extraneous sources unconnected

Material condition of the People.

with the land much exceeds the total demands made by Government. Many hold squares in the Chenab and Jhelum colonies and large sums are remitted to the district by men who have taken service in the army, the Burma police, in Hong-Kong or other colonies. Their wealth would be greater than it is, if they were more thrifty and knew how best to invest the sums at their disposal. A portion of their savings is always invested in land, but a very large part is squandered in drinking, litigation, marriages and other festive occasions.

The position of a clerk is different from that of the cultivator, as he is generally employed in large towns and partly from necessity, partly from a desire to emulate his superiors, he pays more attention to dress than the ordinary peasant. He always wears a woollen coat in the winter. He cannot always afford to keep a servant to cook for him and consequently has very often to depend for food on meals sold by the ordinary baker in the bazar. He rents one or two rooms, which are usually small, ill-ventilated and scantily furnished with a bed, a table and one or two chairs.

A handle-a day labourer lives in much the same fashion as a cultivator, except that he must perforce forgo the more costly garments and must live on the cheaper grains. At a made from wheat seldom forms part of his food, as is the general rule with peasant proprietors.

One of the most noticeable features of the last few decades has been the movement of the village menials from the villages to the towns. This has been especially noticeable in the Tarn Taran Tahsil and the new abadis which have grown up round Tarn Taran and Amritsar town are inhabited mostly by these *kamins*. With the political awakening among the masses the menials have discovered that they are more likely to fare better in the towns than in the villages. There they can get work for cash wages and escape a lot of the dredgery and oppression they have to endure in the villages. They feel more secure and more independent masters of their own fate. Those who have remained in the villages have found their conditions improved as their scarcity value rises and the change in their standards of comfort has in some cases been more outstanding

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than that of the landowners. During the depression of the early thirties the position of the *kamins* remained comparatively better than that of their masters because no change took place in their customary wages. Their children have taken more advantage of the educational facilities provided in the villages than have the children of zamindars, and this is again one of the main reasons for their drift towards the towns, a drift which has been hastened by the growth of industries in and near Amritsar.

14. This Board was established as an experiment in 1935. At first the creditors had no confidence in the Board's proceedings, but seeing equitable agreements being arrived at, and the practical ways in which their claims are recovered as a result of their mutual agreements they are coming in large numbers with their applications. Of approximately ten thousand applications in the first five years, two thirds came from creditors. From 1st. October, 1935 to December 1940, claims of Rs. 1626325/- were settled for Rs. 940786/-. This includes amounts of decretal debts which very rarely involve reduction on bringing about a settlement. If we exclude decretal amounts the percentage of the amount claimed for which settlement was made comes to 33%. More attention is paid to effecting recovery by practical means. If a debtor cannot afford to make a cash payment, his cattle whose price is determined by arbitrators appointed with the mutual consent of the parties, are handed over to his creditors. Instalments are fixed with the consent of the debtor keeping in view his financial position. So generally instalments are paid.

No the money lenders refrain from advancing fresh loans to the poor zamindars. Only well-to-do zamindars give loans to poor zamindars, but this is done rarely. In the very outset the zamindars had to face great difficulties in securing fresh loans. Sometimes it has so come to pass that for want of securing fresh loans, marriage ceremonies had to be postponed.

But the main effect is that Zamindars have grown thrifty and have begun to look down upon evil habits of drinking etc. Being relieved of the burden of their debts, Zamindars are devoting heart and soul to their agricultural duties.

FORESTS

SECTION C.

There are no forests worth the name in this district. Two of the three rakhs under departmental management at last settlement have been disforested and the third (rakh Gagrewal, 534 acres) is a scrub forest which is administered at a loss. Its disforestation and sale have been sanctioned. The State also owns the whole of rakh Bhoru and most of rakh Nag and a considerable area in rakh Sarai Amanat Khan. Bhoru (587 acres) and Nag (444 available acres) were reserved for an experimental scheme of colonisation on well-sinking conditions but for various reasons no progress has been made and the sale of rakh Bhoru at a favourable opportunity has been suggested. Government will consider proposals for its permanent disposals after irrigation has been extended to it. The sale of rakh Nag by private tender to a large landowner for an industrial project is engaging the attention of Government. In rakh Sarai Amanat Khan (1,775 acres) the State still owns 1,284 acres. Out of this area nine acres are held in occupancy right by two tenants to whom Government made an offer to sell on favourable terms which they rejected. Another area of 25 acres has been leased on favourable terms for a period of fifteen years to Subedar Chanda Singh an old tenant of Government whose lease fell in at settlement. On the expiry of his new lease in 1955 he will have the option of purchase. The balance of the crown waste (1250 acres less 27 acres under roads, channels etc.) in this rakh will be sold by public auction. A soil and water survey has been carried out.

There are two more rakhs in which the state still owns small areas—Dinewal (1,042 acres; in Tarn Taran tahsil of which 971 acres are privately owned and 71 acres belong to Government, and Othian (554 acres) in Ajnala tahsil of which 504 acres are privately owned and only 50 acres remain in state ownership. Neither of these small properties repays the trouble of retention and their sale by public auction has been sanctioned.

MINES AND MINERALS

SECTION D.

There are no mines and few mineral resources in the district; of the latter *kankar*, which is used for metalling roads and for the production of lime, is the principal product. The best *kankar* beds are found in Ajnala tahsil in villages Khiala Kalan, Chogawan, Mahlanwala and Kotla Dum. Good *kankar* is also found on both sides of the Grand Trunk Road near Kot Said Mahmud. In the Amritsar tahsil quarrying is usually done in that village and in Khairabad, Guntala, Dhaul Kalan, Dhaul Khurd, Chabba, Sultanwind, Wadali Guru and Warpal. In Tarn Taran tahsil *kankar* is found in Gohlwar, Bogha and Bala Chak. Quarrying is now controlled by the Punjab Minor Minerals Rules published in notification no. 4345 R, dated 23rd December, 1933.

ARTS AND MANUFACTURES.

SECTION E.

1. While it would not be strictly accurate to state that you can buy anything from a gramophone
Introductory. needle to an aeroplane in Amritsar the scope of the city's manufactures is so great that the phrase would not create an entirely erroneous impression. Some idea of the variety of work done may be gathered from the following items taken at random from the statistical table in volume B—cotton ginning, distilling of spirits, ice making, printing, tanning, weaving, manufacture of woollen goods and of sugar, extract on of oil, preparation of acids and chemicals, cigarette making, book-binding, steel rolling, embroidery, hosiery, surgical dressings, pencil making, electric fittings, and manufacture of gramophone records, brass utensils and glass bottles. The district industrial *tempo* has risen from nine factories employing 662 operatives at the beginning of the century to eighty seven factories employing 6750 operatives in 1938.

We have travelled far from the infant industry described

for the 1884 edition of the Gazetteer by Mr. Lockwood Kipling, one time Principal of the Lahore School of Art, which I reproduce on account of its intrinsic interest and the contrast to modern conditions.

2. "It has been remarked in the notice of the history of this district that the Sikh temple buildings are small, not of a high order of architecture, and are overlaid with a plating of gilt copper and beautifully decorated internally. A close examination shows that, while the Sikhs displayed no great originality in their architecture and were content to borrow the inspiration as well as frequently to plunder the actual materials of Musalman buildings, they had made some progress towards the development of a style of art which might have presented some interesting features. There is more in fact in the Sikh treatment of Muhammadan architecture than strikes an ordinary eye; for like the Jain adaptations of similar elements, it promised to lead through a natural sequence of growth to new and probably attractive forms. Mr. Fergusson says of the Amritsar golden temple or Darbar Sahib that it is useful as exemplifying one of the forms which Hindu temple architecture assumed in the 19th century and there for the present we must leave it. The Jains and Hindus may yet do great things in it, if they can escape the influence of European imitation; but now that the sovereignty has passed from the Sikhs, we cannot expect their priests or people to indulge in a magnificence their religion does not countenance or encourage.

Very few religions officially countenance or encourage magnificence; they usually, indeed, begin by denouncing it; but as their professors grow rich and prosperous they almost invariably lapse into decorative pomp. Not only is upper storey of the Darbar Sahib sheathed in plates of richly embossed and heavily gilded beaten work in copper, but the lower storey is encased in a panelling or wainscot of slabs of marble inlaid with cornelian, mother-of-pearl, serpentine, lapis lazuli, and other stones resembling in technique the work on the Agra Mumtaz Mahal, but marked by some notable differences of artistic treatment. The Sikhs are really and fond of decoration as

other Hindus, and they continue to spend large sums of money on beautifying their temple. Wealthy members of other castes are permitted (and find it good policy) to present contributions in the form of inlaid marble slabs or copper plates with which parts of in interior formerly painted in fresco merely, are now being covered. The spirit of catholicity and tolerance which practically obtains in the matter of religious benefactions might surprise those who are accustomed to look on the caste system as absolutely and in all respects shutting off each division from the rest.

The general supervision of the temple is in the hands of a leading elder, at present (1884), Rai Kalyan Singh under whom is a large staff of servitors, including certain craftsmen. Attached to the foundation is a work shop where marble masonry is constantly being wrought for the repair of the shrine. The workmen are Sikhs, and they have the peculiarly leisurely way of addressing themselves to labour which every where distinguishes those who take the daily wage of a wealthy corporation. The great difference between their work and the similar *pietra dura* of Agra lies in the introduction of living forms, as fishes, birds, and animals; sometimes the figure of a devotee, to whose beard is cleverly given a naturalistic air by its being formed of a piece of veined agate, is introduced. The designs, too, though over suave and flowing in line like all modern Indian work, are less Italian in character than those of Agra, and are marked by that local character of all Sikh ornament, which is much easier to recognise than to describe. It is notable that no attempt has been made to apply the marble in lay to the modern drawing-room uses by which alone the Agra inlayers of today manage to pick up a living. No card-trays with jasper butterflies or inkstands with wreaths of vine foliage are offered to the public in Amritsar; and the existence of the industry is unknown to many of the residents.

3. The embossed copper work is wrought independently of the temple by *chhataras* or chasers who, like others of their craft, also work in silver on

Work in
metals

occasion. The doors of the central building in which the Adi Granth is kept during the day are sheathed in silver, and are good specimens of this interesting and beautiful art.

The Sikhs have a tradition that, at the consultations held before beginning the golden temple, it was proposed to make the building gorgeous with pearls, jewels and gold, but that for fear of robbery plates of gilded metal and slabs of inlaid marble were eventually adopted. The metal plates were evidently suggested by the temples of Benares, to one of which, that of Bisheshwar, Maharaja Ranjit Singh contributed gilded coverings for the domes. The temple at Patna, the birthplace of Guru Gobind Singh, it may be noted, was in great part built by his liberality and it is kept in repair by Punjab Sikhs to this day.

The beaten metal work is relatively cheap, a large copper panel about 2 feet 6 inches square, covered with foliage in relief of excellent costing Rs. 24/-. It is obvious there are many decorative purposes to which if our public and private buildings were not so painfully poverty stricken, this art could be applied. Recently a copy of one side of the large door leading from the Akalbunga to the temple has been executed for the South Kensington Museum. The side that is turned to the wall, however, is even more interesting than that selected for reproduction, being a very curious and admirable piece of ivory inlay. Very few of the visitors to the temple are aware of the existence of this inlay, and it is possibly owing to the accident of this being usually turned to the wall and out of sight, that ivory inlay does not form one of the artistic industries so curiously kept alive by Sikh piety. Fresco painting also forms part of the decoration of the interior of the temple, and it seems to be restored more frequently than is necessary. The work of to-day is inferior as decoration to that originally wrought. Flowers, especially roses, are treated in naturalistic manner, and crowded masses of detail in painfully brilliant colours replace the simpler and more ornamental forms of early work.

4. The city of Amritsar contains some good specimens of

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[SECTION E.

architectural woodcarving ; and, although there cannot be said to be a large trade, the carvers and carpenters of the town turn out some excellent work. The town is claimed indeed by the craft as the headquarters of the wood-carver's art in the Province. Whether this is true may be questioned ; but it is certain that some of the best pieces, such as carved doors, etc, contributed to the Punjab Exhibition, 1881-82, came from Amritsar.

5. Brass-ware is wrought in considerable quantities and exported. There are two distinct schools of metal work in the city, one producing the usual brass- and copper-ware of the plains, and the other the tinned and chased copper peculiar to Kashmir which is made for the use of the large colony of Kashmir, by their compatriots. Of the first there is not much to be said.

Brass casting is well done, but the work is not ornamented to such an extent as at Rewari or Jagadhri. A few grotesque figures and objects used in Hindu worship are produced but they are, like all Punjab figure work in Metal, much inferior to that of southern India.

The type of the Kashmir work is a large copper samovar with a perforated base admitting air to a charcoal stove which occupies the centre of the vessel. This form is of course an importation. Salvers or *thalis* are also made in copper which is tinned and enriched by concentric bands of ornament cut through the tin into the copper ground. When new, the effect of the red lines on the dull white ground is not unpleasing.

6. Zinc ornaments for use by the poorest classes are rudely cast, and in some streets the whole of the moulder's operations are carried on in the open air. It is noticeable that the patterns are inferior to those made in Central India and in parts of the Bombay Presidency ; where this cheap material is largely used, and where flexible chains with interwoven links are cast at one operation.

Large quantities of mock jewelery are turned out. Brass,

coloured glass, mock pearls, tinsel and gilt wire with coloured heads are the raw material, which is combined with surprising skill. These articles are sold at fairs and also in large numbers in the *bazars* of all towns, and considering their gorgeous appearance when new they may fairly be considered cheap.

At Jandiala, in this district, brass ware is made for exportation, and the town also has a name for *ekka* wheels.

7. The ivory carving of Amritsar probably began with the comb trade. Combs are necessary to Sikhs
Ivory.

form a permanent portion of their attire. Box wood is used in large quantities, and cheaper woods are also employed; but the best comb is made of ivory, decorated with geometric patterns in open work like delicate ivory lace. Paper knives, and the long parting comb of the European toilet are also made. Occasionally sets of chessmen and similar small articles are carved, but they are comparatively rare.

8. The blacksmith's craft, generally backward, is not much more advanced here than elsewhere. The *dol*, a
Iron.

bowl-shaped bucket resembling those attached to mediaeval wells in France, is neatly made in rivetted sheet iron in some numbers, and it is curious that notwithstanding the very cheap rate at which English nails are imported, it should still pay the local smith to make large quantities of nails. The fact is European ingenuity is directed towards making the nail as unobtrusive as possible, while the native carpenter prefers to show it. A long and slender nail with a large clout head is his favourite form and it is driven without mercy through the most delicate carving. Most native doors and windows are disfigured by this nail head, which stains the surrounding surface, and tells among the carving as a large black blot. Hill iron was formerly much used, and it is still spoken of as Suket Mandi iron. It is preferred for its softness and malleability by some smiths, but English iron is driving it out of the market."

9. 1884 may seem to belong to a different age but even since the last edition of the Gazetteer was prepared
Modern industrialisation. a quarter of a century ago changes have been extensive and development remarkable. The shrewd business-

men of Amritsar have taken advantage of every favourable turn of the economic wind, every advance in mechanisation and power, every improvement in means of communication and transport. The result is a hive of industry which of late years has tended to concentrate near Chbeharta which is served by the main line of railway, the Grand Trunk Road and a power station. The extension of municipal limits has also had some influence in driving factories further out in order to escape municipal imposts. Some factories have even established themselves as far away as Kharsa, a railway station on the Grand Trunk road nine miles from Amritsar. Most of the ribbon development has occurred on the west side of the town along the road to Lahore but a few factories have recently established themselves at Verka to the north-east where electric power is available within a few yards of their doors.

Apart from its effect on the landscape (and on the value of land near the city as a commodity the poorest quality of uncultivated land will fetch a bigger price than the best cultivated land if it is conveniently located between the Grand Trunk road and the railway) the extension of manufacturing has two other interesting aspects—the tendency to displace goods which require the slow loving care of the individual craftsman and (or perhaps consequentially) concentration on the mass production of cheap articles. Perhaps this latter phase is inevitable, for the small margin of surplus income, which is all the great majority of the populace have, must be wheedled from their pockets by a mass of cheap articles attractively produced.

10. *Pashmina* which occupied pride of place in the last edition of the Gazetteer has been ousted by the power looms introduced by the woollen mills. For many years Amritsar was famous for the manufacture of very fine shawls which were made from the finest wool (*pa'ham*) from Tibet and Kashmir. This industry has almost ceased to exist but today there are in Amritsar a number of factories where a less fine quality of shawl is woven. The *pashmina* shawl industry was practically killed by shawls imported from France and Germany which were nicely finished

Woollen shawls
and shawl
cloth.

and were considerably cheaper than the local article. About ten years ago however alterations in the tariff duty on shawls and woollen yarns were made which resulted in merchants here being able to import yarn, manufacture shawls locally and sell them cheaper than the French or German shawl. An impetus to the shawl weaving industry was thus given and factories engaged in this work have increased considerably of late. The woollen yarn from which these shawls were made was at first imported from France and Poland but for the past few years the bulk of the imported yarn has come from Japan with which country these others are unable to compete. The shawls are made in lengths of 6 to 6½ yards and are sold by weight. Pieces of 27 to 30 yards are also made then cut into the required lengths. Local wholesale merchants buy the shawls or shawl cloth from the the factories and have them cleaned, washed and dyed in various colours. Thereafter they are embroidered. Most of the embroidery is done in two mills which were started a few years ago for this purpose. The finer work however is done by Kashmiri Muhammadans in their own homes and when specially fine embroidery is required the shawl cloth is sent to Kashmir to be embroidered there. The chief markets for local shawls are Bengal, Madras and other provinces of India.

11. With the introduction of woollen spinning and weaving mills in the Amritsar district, the manufacture of heavy woollens such as blankets, serges etc. came into being, and Amritsar has become a centre for the production of woven woollen cloths of the heavy varieties, and thus a woollen manufacturing centre. Besides the heavy woollens, several new factories are now producing various types of woollen serges, tweeds and worsteds.

12. The manufacture of silk piecegoods, an old industry, has dwindled and at the present time is practically non-existent. The silk article has given way to artificial silk fabric. Three or four factories are now turning out artificial silk fabrics. At first these factories employed Japanese textile experts but these have now been replaced by Indians who have been trained at industrial schools and mills in Bombay and Ahmedabad. The yarn used by these factories

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[SECTION B.

is imported from Japan and Italy. The output at first was perhaps crude and of simple weave but with additions to the machinery fine fabrics can now be produced. These are sold in the local market and also to moffusil markets.

13. Formerly all coating and shirting cloth was imported from England and certain Continental countries but nowadays a considerable amount of cloth required in Amritsar for local consumption and for distribution to other markets in Northern India is manufactured in local factories. For this purpose silk yarn, staple fibre yarn and cotton yarn are used. The silk and staple yarn are obtained from China, Italy and Japan while the cotton yarn comes from Bombay and Central Provinces. The yarn is first dyed and then woven into cloth to suit present-day designs. None of the factories has its own finishing plant but local enterprise has been equal to the occasion and there are now a few mills established where bleaching and finishing of cloth is done and where it is made ready for sale locally or to the surrounding districts.

14. Carpet weaving has been carried on in Amritsar for many years and although the industry is not flourishing as it did a number of years ago, very fine qualities of carpets are still produced and exported to various countries throughout the world. Expansion began in about 1919. A woollen mill for the manufacture of carpet yarns was established in 1924 and it is estimated that at the close of 1929 there were upwards of six hundred hand-weaving carpet looms in the district employing over three thousand weavers. The carpets increased not only in quantity but also in quality and there was a marked revival overseas in the use of Amritsar carpets. The industry continued to flourish until the economic crisis shook the world ten years ago when the demand, particularly in America which was the chief market, closed down almost completely and severely affected the local industry. Since that time the carpet factories have been working mainly on cheaper grades of carpets for the European and Canadian markets. Changes of fashion have no doubt also contributed to reduce

activity. There are four factories operating in or near Amritsar, three in Indian ownership and one a European company. The carpets are hand-woven by muslim weavers who are trained from a very early age. They are paid according to the number of stitches woven into a carpet which may vary from forty to four hundred to the square inch.

15. There are nowadays a few factories where articles such as pullovers, socks and undervests are manufactured. This industry is small at present and cannot be compared to the hosiery industry of certain other towns in the punjab.

16. A sugar mill under the name Amritsar Sngar Mills Co., Ltd., was started about 1924. In this mill coarse raw cane sugar (*gur*) is refined. The *gur* is important from the United Province. The average daily output of this mill about 120 bags, is consumed locally.

The city has developed a chemical industry. Its plant is as good as that of any other industrial city of India and local production is meeting the provincial demand.

17. The Amritsar distillery situated outside the Mahansingh Gate of the city, but soon to move to Khassasingh Gate, owing to the public nuisance caused by its effluent in a congested urban area, was founded by Messrs A.E. and E.J. Dyer in 1898. Since 1924 it has been a public liability company with a capital of two and a half lakhs of rupees which was doubled in 1938. The distillery is doing the biggest business of its kind in the province and in addition to the usual county spirits, special spiced spirits, rectified spirits and methylated spirit it now produces whisky, gin, brandy and rum made in some cases from different bases from those used in England. Some idea of the progress of the company will appear from the fact that while in its first year it paid Rs. 1,66,094/- as stillhead duty the amount paid in 1938-39 (forty years later) was Rs. 17,26,734/- (the rate of duty per London Proof gallon of plain spirit having changed in the interval from Rs. 4/- to Rs. 6/4/-).

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18. Labour conditions in the industrial areas have remained fairly quite. This is due to the fact that in the Labour. first place there are no very large labour concentrations in the district, and secondly that the conditions of labour are such that unless these are exploited by persons pursuing political motives and the labourers are fairly content since they can find more or less permanent employment. Fortunately the Amritsar district has not suffered from famine conditions, and as Amritsar city itself is the largest commercial city in Northern India, there is very little of what can be termed unemployment among the labouring class.

COMMERCE TRADE

SECTION F

1. Amritsar has always held the highest position of any town or city in the province as an *entrepot* of Imports. trade. Goods imported by its merchants find their way to many corners of India and to Afghanistan. At one time the chief imports were cotton and woollen piecegoods from Lancashire and Yorkshire but the import of cotton goods has for some years been on the wane and the bulk of this market's requirements is now supplied by Bombay and Ahmedabad mills. Japan supplies the Amritsar market with a great variety of sundry articles, e.g. buttons, laces, ribbons, combs, cutlery, crockery, electrical goods, in addition to large quantities of cotton, woollen and artificial silk piecegoods and woollen yarn. Other commodities imported mostly from Continental countries are dyes, sewing machines, chemicals, medicines and hardware of various descriptions.

2. The principal exports from Amritsar are goatskins, sheepskins, cow and buffalo hides, wool, goathair, and seeds of various kinds such as celery and sesame. The largest market for goatskins is America to which country a considerable number of skins is exported. Sheepskins are chiefly taken by Scandinavian countries, France and Italy but a fair quantity is sent to Madras for tanning and despatch

to the London market. Hides are exported to England, Greece and the Near East and a small quantity to America. A certain quantity of wool is exported to America but the bulk of the wool collected in this district goes to Liverpool where it is sold at the wool auctions held there about once a month. Goathair is also sent to the Liverpool auction and a certain amount to America. The seeds produced in or near this district are mainly taken by America where oil is extracted and used in medicines.

3. A large trade in gold bars was carried on at one time
Gold. Gold was imported from London. It was used to some extent in the embroidery industry but chiefly for the making of ornaments. When England went off the gold standard the price of gold rose sharply and has remained at a high level since 1931. Much of the gold held in India in the shape of ornaments has since that date been disposed of and there has been little trade in gold bars for some years.

4. Importers receive considerable assistance in their bus.-
Banks. ness from the Banks established here. These are:—

Established in Amritsar.

National Bank of India Ltd.	1900
Punjab National Bank Ltd.	1901
Allahabad Bank Limited	1905
Chartered Bank of India Australia and China	1908
Central Bank of India, Ltd.	1917
Imperial Bank of India	1921
Lloyds Bank Limited.	1930

COMMUNICATIONS

SECTION G

1. Amritsar as a compact accessible district in the centre
Introductory. of the province, an industrial area and *entrepot* unrivalled in Northern India, and a religious and political magnet, has always had an early share of any advance in facilities for transportation.

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[SECTION G

2. The Noth Western Railway from Lahore enters the west side of the district near Atari in the Tarn Taran tehsil, and runs thence 17 miles to Amritsar, with stations at Atari, Guruser Sutlani, Khasa and Chheharta. From Amritsar to the bridge over the Beas at Wazir Bhulla the distance is 27 miles and there are stations at Mananwala, Jandiala, Tangra, Butari and Beas (Wazir Bhullar). This is the main line from Delhi to Peshawar via Ambala. When originally constructed the line was single, but it is now a double line all through the district.

Amritsar is the junction of the following branch lines.--

(1) Amritsar-Pathankot line, with a further extension on the 2 ft. 6 inches gauge from Pathankot to Baijnath Paprola.

(2) Tarn Taran Patti-Kasur.

(1) *Amritsar-Pathankot.* Pathankot is at the foot of the hills and this line leaves the district at Jaintipur where it enters the Batala tehsil of Gurdaspur. It runs for 17 miles in the Amritsar district with stations at Verka, Kathunangal and Jaintipur.

(2) *Tarn Taran-Patti-Kasur.* This branch line runs southward from Amritsar Junction through Tarn Taran, entering the Kasur tahsil of Lahore district near the town of Patti at the distance of about 26 miles from Amritsar. There are stations in the district at Bhagtanwala, Sangrana Sahib, Gohlwar-Varpal, Dbukhnawaran, Tarn Taran, Jandoki and Kairon.

Another branch line (*Verka-Narowal-Sialkot*) has its junction at Verka five miles from Amritsar. This section of the line upto Dera Baba Nanak was opened on 3rd May 1927, upto Jassar on 6th May 1929 and from Jassar to Narowal on 21st December 1927. It leaves the Amritsar district at Fatehgarh Churian where it enters the Batala tahsil of Gurdaspur but reenters Ajnala tahsil at Ramdas. There are stations at Majitha, Kotla Gujran and Ramdas; and the station for Fatehgarh Churian is also located in this district. Ramdas to some small extent serves the Ajnala tahsil which was formerly altogether cut off from railway facilities.

The main line was originally constructed by the Sind Railway Company with a Government guarantee of 5 per cent on the capital expended. The first portion laid down was that from Amritsar to Lahore, in 1862, and this was the first section of railway opened in the Punjab. The extension from Amritsar to Delhi was begun in 1864 with the same guarantee, and the whole was taken over in 1870 by the Sind, Punjab and Delhi Railway Company, which came into existence in that year. The iron girder bridge over the Beas was constructed and opened in 1869. This proved a work of much difficulty. The floods of 1870 and 1871 damaged the protection works, and in the later year traffic was entirely stopped. The damaged girders were renewed and five extra spans were added, and the bridge was reopened in 1873, since when no serious damage has occurred. The actual cost of the bridge was close upon twenty three lakhs of rupees. The doubling of the line necessitated the building of a new steel bridge, which was opened for traffic in 1909. It now consists of 9 spans of 200 ft. each and is situated a few hundred yards above the old bridge, which has since been converted into a road bridge. The branch line from Amritsar to Pathankot was constructed by the Provincial Government in 1883.

The original covenant with the Sind, Punjab and Delhi Railway Company gave Government the power to buy the Company's Railway at the end of twenty-five years from the date of commencement of the lease of the land acquired for it. This period expired on 31st December, 1985, whereupon Government, in view of the strategical importance of the line, purchased the whole line, and this, including the Pathankot branch, is now worked by the North Western Railway. The Amritsar, Tarn Taran and Patti Branch (opened in 1907) belonged to Messrs Killick Nixon & Co. from whom it was purchased by the Central Government on 31st December 1935.

The Amritsar tahsil is thus traversed from end to end by the main line and between Amritsar and Jaintipur by the Pathankot branch line, while the Tarn Taran tahsil is bisected by the Patti branch line, so that these two tahsils possess excellent railway facilities. The Ajnala tahsil, which had no

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railway at all, is now served by the Amritsar-Verka-Narowal Section via Ramdas station.

3. The district is even better served by roads some of which are metalled and others unmetalled. Most of the metalled roads are maintained by the Public Works Department from provincial funds, while some metalled roads and all unmetalled roads are maintained by the District Board. The more important of these latter roads are classified as class II Roads, and the Punjab Government contributes 25 percent of the expenditure on their maintenance to the District Board. All the metalled roads in the district have been made dustproof by surfacing with tar. A mechanical road grader is used by the District Board in maintaining some of the unmetalled roads, which are thus kept fairly motorable throughout the year. Most of the roads maintained by the Public Works Department are on the list of Class I Arterial Roads. They are :—

1. Grand Trunk Road. Arterial No 1

This road runs parallel to the main line of the railway across the district from the Beas River to the Lahore border two miles beyond Attari, a distance of 45 miles. Its metalled surface is twelve feet wide from Beas to Amritsar, but beyond Amritsar it is twenty feet wide to cope with motor lorry traffic which on this section is the heaviest in the Punjab. Average cost of maintenance of this road with approach roads to Putari, Jandiala, Chheharta and Khana railway stations is Rs. 50,000/- per year. The total length maintained is 50.55 miles.

2. Amritsar-Bajjnath Road- Arterial No. 14.

The Amritsar-Pathankot Road which had not been remetalled for many years and had sunk almost to the status of a *kacha* road was taken over by the Punjab P. W. D. for maintenance in the year 1924-25 and has since then been kept up in a good condition. 18.79 miles of this road are in the Amritsar District, and the average cost of their maintenance with approach roads to Verka, Kathunangal and Jaintipur stations is Rs. 18,000/-.

3. Amritsar-Sialkot Road.

Arterial No.34

This is the only metalled road in Ajnala tahsil. It passes from Amritsar through Ajnala to Ramdas. It was taken over by the Punjab P. W. D. from the District Board in the year 1927-28 and has since then been surfaced with tar. It crosses the Halki Stream by a bridge, which formed till 1938 the only sure communication between the two parts into which that stream divides the tahsil. Beyond Ramdas the road passes through Gurdaspur district to Sialkot crossing the Ravi near Dear Baba Nanak by a combined rail-road bridge. Average cost of maintenance of 29.08 miles in the Amritsar District is Rs. 26000/- per year.

4. Roads of Class II taken over from the District Board in April 1938 and now maintained by the Punjab P. W. D.

- (i) Amritsar-Hariker Road passing through Tarn Taran 15.13 miles. Cost of maintenance in 1938-39 was Rs. 21900/-.
- (ii) Tarn Taran-Goindwal Road passing through Fatehabad, 13.81 miles. Cost of maintenance in 1938-39 was Rs. 18600/-.

The total length of metalled roads in the district maintained by the Punjab P. W. D. was 127.36 miles on 1.4.1939.

The District Board maintains a length of 18.4 miles of Class II metalled and 117 miles of Class II unmetalled roads whose cost of maintenance in the year 1938-39 was Rs 16000/-.

In addition to the above the District Board maintains 3 miles of class III metalled and 222 miles of class III unmetalled roads at an average annual cost of Rs.24000/-.

The following table shows the principal roads of the district together with the halting places on them and the conveniences for travellers to be found at each. The good motorable roads along the banks of the canals are not shown as they are not available to ordinary traffic.

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Route→	Halting Place.	Distance in Miles.	Remarks.
Amritsar to Jullundur Grand Trunk Road (metalled and tarred)	Jandiala	10	Railway station $1\frac{1}{2}$ miles distance. Serai, encamping ground and Police Station. Canal rest house $1\frac{1}{2}$ miles distance. Post office and Telegraph Office.
	Raya	12	Encamping ground and canal rest house.
	Wasir Bhullar	5	Beas Railway Station Railway Officers' rest house. Post Office.
Amritsar to Lahore Grand Trunk Road (metalled and tarred).	Gharinda	12	Police Station, encamping ground. Gurnagar Sutiani Railway Station $\frac{3}{4}$ mile distance.
	Attari.	5	Railway Station, Post Office, Rest House.
Amritsar to Ramdas. (metalled and tarred).	Raja Sansi	6	Encamping ground, Post Office.
	Ajnala	9	Tahsil, Police Station, District Board Rest House Encamping ground and Serai. Post Office.
	Ramdas	13	District Board Rest House. Serai. Post Office.
Amritsar to Batala (metalled and tarred)	Verka	6	Railway Station, Post Office.
	Kathu Nangal	6	Railway Station one mile distance Serai, canal rest house, camping ground. Police Station. Post Office.
	Jaintipur	7	Railway Station. Canal rest house.
Amritsar to Harike ferry (16 miles metalled and tarred)	Tarn Taran.	15	Tahsil. Camping ground. Police Station. District Board rest house. Post Office and telegraph office.
	Sirhall Kalan	12	Camping ground and serai. Post Office. Police Station.
Tarn Taran to Golndwal. (metalled and tarred)	Fatehabad	12	Post Office.
	Golndwal	3	Ferry Post Office.

4. River traffic is now very local and relatively unimportant
 Ferries. The ferries on the river Ravi which are controlled by the Amritsar authorities are .

Name of ferry.	Miles from point at which river enters district.	Number of boats maintained.
1. Kassowala	1	2
2. Phulpura	4	2
3. Daud	6	3
4. Daiwala	12	3
5. Mirowal	16	4
6. Bhainian	18	3
7. Lidhar	20	2
8. Bhindian	24	3
9. Kakhar	32	3

Some of these ferries, such as Daud and Mirowal, take their names from villages in the Sialkot district. On the Beas river the ferries managed from Amritsar are :

Name of ferry. →	Miles from the point at which river enters district.	Number of boats →
1. Chakoki	12	4
2. Gagrewal	15	4
3. Vairoval	20	4
4. Goindwal Khamba	27	4
5. Goindwal Miani	24	3
6. Johal	29	4
7. Munda	31	4
8. Ghurka	34	4
9. Chamba	37	4

The ferries on both the rivers are supervised by a daroga with the aid of two peons. The leases are sold each year separately, or in pairs to the highest bidder by the district board which is the controlling authority.

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[SECTION G

5. (a) *Post offices.* The Head Post Office at Amritsar is situated on the New Court Road and commands a prominent position. It is a new building which provides accommodation for the Post and Telegraph offices and other offices such as the Telephone Exchange and the Office of Sub Divisional Officer, Telegraphs. In the town itself there are 15 sub-offices and 5 branch offices in addition to the Head Office under the control of the Postmaster Amritsar. There are 19 sub-offices and 204 branch offices in the interior of the district which are under the control of the Superintendent of Post offices. Gurdaspur Division: To afford posting facilities to the public 92 letter boxes are located at important centres and cleared at convenient hours.

The Amritsar Head Office issues four deliveries during the day at convenient hours. Besides the Amritsar Head Office there are two delivery Sub-Offices in the town namely (1) Khalsa College, and (2) Medical School. A post box system for delivery of mails is also available.

The Railway Mail Service office situated at the Amritsar Railway Station serves as an intermediary for the exchange of mails with post offices and the various running sections. This office is under the Superintendent R. M. S., Division, Lahore:

(b) *Telephones.* Amritsar is the headquarter of the Sub-Divisional Officer Telegraphs whose office is situated in the compound of the Post and Telegraph Office. This sub-division embraces the area bounded by Lahore, Kasur, Ludhiana, Chamba and Manali. The maintenance and development of all telegraph and telephone facilities (including those of railway and canals) is in the hands of the Divisional Engineer, Telegraphs, whose headquarters are at Ferozepore.

The Telephone System has developed by leaps and bounds during the last twentyfive years. In the year 1914 it was only a 50 line magneto exchange. In 1922 it was converted into 300 line central battery system. In the year 1925 this was converted into an automatic system which at present serves about 500 subscribers in the city and its suburbs. Amritsar is now directly

connected with almost all the important places in the Punjab; as also with the general telephone system of India. The number of telephone calls now dealt with by this exchange is about 1200 a day many of which are made to Calcutta, Bombay, Karachi, Madras and Cawnpore. A number of Public Call Offices has also been opened in the City and Civil Area at convenient centres.

(c) *Telegraph Office.* There is a departmental telegraph office at Amritsar located in the same building as the Head Post Office. The City area is also served by several combined post and telegraph offices the most important being the Majith Mandi and the Golden Temple Offices. All the offices are in direct telegraphic communication with Lahore. The phonogram system is available to telephone subscribers according to which telegrams are received from them on the telephone for onward transmission. Telegrams received for delivery are also telephoned to the subscribers.

FAMINE

SECTION H

Since the scarcity of 1868-69 described in chapter I there have been other years of scarcity, such as 1899-1900 and 1907-08 when the failure of the rains resulted in a serious shortage of fodder and the price of wheat and other principal staples rose very high. This is liable to happen in any year, but even in the worst years famine was never proclaimed and is never likely to be so, as the district is so well protected by canal and well irrigation. In fact, Amritsar may be regarded as a district from which large supplies can be exported in case of famine in other parts of India, not only from local produce but from the huge imported stocks always held in the city. The unprotected area of the Ajnala tahsil which lies beyond the Sakki Nala, is the tract most quickly affected by a shortage of the rains and consequently most liable to famine, but despite its isolated position and lack of communications by rail and road, even here no serious famine need be anticipated. The 83 estates classed as insecure in the district come under regular review by the Collector who is thus forewarned of the advance of distress.

CHAPTER III—Administrative.

SECTION A—ADMINISTRATIVE DIVISIONS.

1. The Amritsar district lies in the Jullundur division which is in the administrative charge of a Commissioner whose headquarters are at Jullundur. District administration is in charge of a Deputy Commissioner who among other functions performs the duties of District Magistrate and Collector and is the local agent of the Court of Wards Punjab (under whose superintendence Atari is the only estate in this district at present). To assist him he has nine Extra Assistant Commissioners, one of whom is additional District Magistrate, one revenue assistant, and one treasury officer. The others do magisterial, revenue and miscellaneous executive work under the direction of the Deputy Commissioner. There are no sub-divisions in the district which is divided into the three tahsils of Tarn Taran, Amritsar and ajnala each in charge of a tahsildar assisted by a naib tahsildar. Tahsildars ordinarily exercise the powers of a second class magistrate and assistant collector second grade. Naib Tahsildars have the same revenue powers but are ordinarily third class magistrates. The subordinate revenue staff (at the close of settlement operation in 1940) consists of the following number of kanungos and patwaris:—

	District Kanungo	Naib Sadar kanungo	Office kanungo	Field kanungo	Special muharrir	Patwaris	Assistant patwaris.
Headquarters.	1	1			1		
Tarn Taran tahsil.	...	...	1	5	...	108	7
Amritsar tahsil.	...	...	1	5	...	114	2
Ajnala tahsil.	...	...	1	5	...	95	5
Total district.	1	1	3	16	1	317	14

In addition to the stipendary staff there is usually a number of honorary magistrates and assistant collectors. These at present are one gentleman exercising the powers of first class magistrate and of an assistant collector first grade, three first

class magistrates sitting singly, one third class magistrate, and the Amritsar city bench exercising second class powers.

The administration is assisted in the rural area by lambardar or village headmen, safedposhes and zaildars. All these appointments are in the Collector's hands subject to the appellate control of the Commissioner and the Financial-Commissioner. The old leadership in the villages is maintained in the hereditary basis of succession to lambardar. The other posts are filled by selection from a limited field consisting of lambardars and candidates approved by the Commissioner.

Each village has one or more headmen according to its size and tribal constitution and the suitability of their number is reconsidered at each settlement. No general reduction has been considered necessary in the current re-settlement. There are now 934 lambardars in Tarn Taran tahsil, 1084 in Amritsar tahsil and 777 in Ajnala, a total of 2795 for the 1090 Estates in the district. The number of posts has fallen by 31 only in the last twenty five years.

3. From the settlement report of 1914 it appears the chief headmen (*ala lambardars*) were appointed in all villages at the second regular settlement in 1865. They were remunerated by a cess of one per cent on the land revenue over and above the *pachotra* taken by the ordinary headmen, and in addition a plot of land was set aside in each village and known as the *ala-lambardar's muafi*. The revenue of these plots was fixed but remitted in favour of the chief headmen. Subsequently, under the orders contained in Punjab Government letter No. 31, dated 1st February 1890, these *muafis* were resumed and in lieu of them cash *iams* of equivalent value, but not exceeding one per cent of the revenue of the village, were assigned to *ala lambardars*. In the third regular settlement a scheme was sanctioned under which the office of *ala lambardar* was to be abolished on the death of the existing incumbent in villages where there were only one or only two *lambardars*. Where there were more than two *lambardars* the office of one *ala*

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lambardar was not to be interfered with during the term of settlement. The value of the cash *inams* at that date was Rs. 9,078/-. Of this sum Rs. 5,127/- were to be continued for the term of settlement, and the balance of Rs. 3,951/- was to be resumed on the death of existing incumbents. It was not, however, to be credited to Government, but to be utilised for the creation of *safedposhi inams*. Sixteen years later Punjab Government letter No. 233-S, dated 1st June 1909, sanctioned the gradual abolition of the *ala lambardari* system in all districts where it still obtained. On the extinction of each office; on the death, dismissal or resignation of the existing incumbent the special cess of one per cent was no longer to be collected and the cash *inam* was to be resumed. Up to the limit of Rs. 3,951/- sanctioned in 1893 resumed *inams* were to be devoted to the creation of *safedposhi* grants, but beyond that limit they were to be credited to Government. The effect of these orders was to reduce the number of *ala lambardars* from 1,134 at the third regular settlement to 569 at the fourth regular settlement. In the ordinary course of nature the number has considerably declined since then and there are now only 59 left to enjoy *inams* aggregating Rs. 668/—21 in Tarn Taran tahsil to the value of Rs. 195/-; 7 in Amritsar tahsil to the value of Rs. 353/- and 11 in the Ajnala tahsil to the value of Rs. 120/-.

4. The *zaildari* system was introduced into the Amritsar district in 1865 by Mr. Prinsep, settlement commissioner. The *zaildars* were paid by a surcharge on the revenue of the *zail* which varied from twelve annas to one rupee eight annas per cent.

There were originally fortyone *zaildars* but the limits of their *zails* did not always correspond with those of *patwari* circles or police stations. In the review of the arrangements undertaken in the third regular settlement (1893) the number of posts was raised to fortythree and each *zaildar* (except the incumbent of the head-quarters *zail* who received twelve anna per hundred rupees) was paid one per cent on the revenue of his *zail*. At the fourth regular settlement (1914) no change

Superior
rural officials—
zaildars and
safedposhes.

was made in the number or boundaries of zails but the inequalities in the scale of payment were removed by fixing the pay of thirtyfour posts at Rs. 350/- a year and the other nine at Rs.450/- a year. These arrangements have been reconsidered in the fifth regular settlement (1910) and considerable changes have been made. Most of these have been alterations of boundaries. The principal consideration has been administrative convenience. With the creation of two new police stations since the previous settlement several zaildars found themselves serving more than one police station. This has been remedied and the Superintendent of police has taken the opportunity to improve the limits of this police stations. Due regard was had to vested interests. The creation of an additional zail in the southwest of Ajnala tahsil to improve the control of crime was sanctioned with effect from the enforcement of the reassessment. Each zail has at least one assistant called a *safedposh*. The number of these posts was reduced at last settlement from eighty six to fifty nine which allowed sixteen zails to have two *safedposhs* each. In this settlement some changes have been made which produced a net reduction of six posts. A suggestion for the increase of emoluments of zaildars and *safedposhs* will come under consideration when the new assessment is enforced. In the following statement of zails as reconstituted the number of estates in each zail is shown in brackets after it and those zails which have two posts of *safedposhi* are italicized.

Tarn Taran tahsil.—Atari (15), Gharinda (19), Serai Amanat (16), Kasel (18), Panjwar (22) Manchahal (24), Tarn Taran (25), Kang (20), Rasulpur (33), Khadur Sahib (18), Jalalabad (29), Vairawal (27), Jamerai (15), Kairon (29), Sirhali (20), and Munda (14).

Amritsar tahsil.—Mirankot (25), Amritsar (14), Gilwali (29), Majitha (21), Tarpai (33), Chawinda (40), Mattewal (38), Patchapur Rajputan (22), Bundala (25), Mallian (22), Tarsikka (30), Mehta (21), Sheron Bagha (17), Butala (20), and Chhika Rath (30).

Ajnala tahsil:—Ramdas (34), Gaggomahl (34), Vachhoa (32), Sehnsra (25), Ainala (27), Ballarwal (31), Karyal (27), Rajasansi (18), Bhindi (35), Bhilowal (24), Kakkar (21), Khiala (22), and Lopoke (17).

SECTION B—CIVIL AND CRIMINAL JUSTICE.

1. The principal court of original Civil Jurisdiction in the District is that of the District Judge. For the trial of ordinary Civil suits there is at present a staff of 6 Subordinate Judges, all members of the Provincial Civil Service, consisting of a Senior Subordinate Judge, three 1st Class and two 2nd Class Subordinate Judges. Two of these are posted in the tahsil towns of Ajnala and Tarn Taran. There is also an I. C. S. Officer receiving Judicial training as a 4th Class Subordinate Judge. In addition, a Small Cause Court is provided for Amritsar town, of which the present staff consists of a Judge, an Additional Judge and a Registrar, who are P. C. S. officers. There is no honorary Subordinate Judge at present in the District.

It is interesting to note that in the twenty two years from 1916 to 1937, the number of Courts of Subordinate Judges in this district was never less than 11 and was once as high as 16 (in 1925). The subsequent reduction, due to the fall in the volume of civil litigation, is the direct result of the agrarian legislation of recent years, commencing with the Relief of Indebtedness Act of 1934, and in particular of the setting up under that Act in 1935 of a Debt Conciliation Board which is empowered to deal collectively with the debts of agriculturists. Money litigation has also been discouraged by the increased protection afforded to judgment debtors against the various modes of recovery open to decree holders. Table number 35 in volume B clearly exhibits the effect on money suits.

The District Judge exercises civil appellate powers and this forms the bulk of his civil work. He very rarely tries a suit of the ordinary civil nature, but is still the only court to

the district empowered to deal with cases under the Lunacy Act, the Divorce Act, the Trusts Act and contested probate cases under the Indian Succession Act. Powers under the Provincial Insolvency Act and the Guardian and Wards Act, as also limited powers under the Indian Succession Act have been delegated to selected Subordinate Judges. The Judge of the Amritsar Small Cause Court is at present invested with powers under the two former Acts. The Senior Subordinate Judge exercises limited civil appellate powers and enjoys exclusive jurisdiction under the Land Acquisition Act. Control of the Process-Serving Agency, which consists of a Civil Nazar, 10 Naib Nazars, 10 Bailiffs and 96 Process servers is vested in the Administrative Subordinate Judge. This appointment is of a very recent creation, and is held by the Registrar, Small Cause Court, in addition to his own duties.

The Insolvency Judge is assisted by an Official Receiver, who acts as an officer of the Court for the liquidation of insolvents' estates, and distribution of the assets among the creditors. All court sales are conducted by an Official Auctioneer. These two officers are remunerated by percentage commission on the sums realised or handled by them. In addition, there are six appointments of Oath Commissioners and four of commissioners and for the recording of evidence, which are held by selected practising lawyers. The former are authorised to charge eight annas for each affidavit attested by them; the latter receive the fees fixed for each commission by the issuing courts.

The District Judge is also Session Judge of the Amritsar Division, and in that capacity tries all cases committed to him, the great majority of which are murder cases, and also deals with all criminal appeals from 1st Class Magistrates in which the sentence does not exceed four years. The criminal work has increased so greatly in the past six years that it has been found necessary to obtain the services of one or more Additional Sessions Judges for a considerable part of each year. The average number of murder cases decided each year from 1934

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to 1939 inclusive was 71 as against an average of 38 such cases in each of the 5 years 1929 to 1933.

2. The Amritsar Bar has a strength of 299 numbers, of whom 12 are Barristers-at-Law, 43 are Advocates of the High Court and the remaining 244 are pleaders.

The Bar.
The sanctioned cadre of petition writers for this District is 120, but there are only 91 practising at present, and further recruitment has been stopped in pursuance of the policy of of reserving the work of drafting and conveyancing for members of the legal profession.

3. The Deputy Commissioner is *ex officio* registrar for the district but most of his work is done by a Extra Assistant Commissioner who is appointed Joint Registrar. There are four registration Sub-districts—one for each tahsil and one for the Amritsar municipal area. Each of these sub-districts has a departmental sub-registrar while tahsildars are *ex officio* joint sub-registrars of their tahsils. The annual revenue from registration is now about Rs. 90,000/-.

SECTION C—LAND REVENUE.

1. It is in many cases almost impossible to class a village satisfactorily under any one of the ordinarily recognised tenures: the primary measure of right between the main sub-divisions of the village may follow one form, while the interior distribution among the several proprietors of each of these sub-divisions follows another form which itself often varies from one sub-division to another. The following table shows the classification recorded in the fifth Regular Settlement:

Village comm
unities and
tenures.

Area	Zamindari	Pattidar	Bhalachara	Total
Tarn Taran tahsil ...	3	164	188	355
Amritsar tahsil ...	5	239	121	345
Ajvala tahsil ...	17	204	126	347
Urbans and suburban circles ...	...	9	14	23
District ...	25	616	449	1,090

Only five estates in the district have made ancestral right the unit for distribution of revenue over their holdings. In all others the owners made themselves responsible for the revenue of the area actually in their possession.

2. The following paragraphs are quoted from a report by Mr. E. A. Prinsep, Settlement Commissioner, the officer who was in charge of the Second Regular Settlement of Amritsar from 1862 to 1865. They describe clearly the main forms of tenure found in the district and the way in which one form is developed out of another:—

Development
of the various
forms of tenure;

“Generally speaking, the Theory of tenure may be described as at one time or other coming under one of the following stages:—

- I.—The Patriarchal or Landlord.
- II.—The Communal or Joint stock.
- III.—The Divided, regulated by ancestral shares.
- IV.—The Divided, regulated by customary shares.
- V.—The Accidental, regulated by possession.

I know of no better way of showing the transition from one stage to another, and the causes which produce it, than by giving the following illustration.

The founder of a village secures a property by purchase, grant, appropriation or conquest. He has a family of six sons, he holds it all himself. This represents the first period, and corresponds with the pure Landlord system.

At his death the six sons being connected by a strong tie, hold the property in common; those sons too prefer to maintain the joint interest in this form; land is abundant, revenue is taken in kind, they have no differences to occasion any necessity for resort to division, so the "Communal" system is maintained intact, the interest of each brother or shareholder being regulated by the laws of inheritance.

In course of time population increases, and with it the demand for land; dissensions begin. The descendants of one son have been cultivating less-those of another, more, than the shares which regulate the division of profits. To prevent further disputes, the estate is divided according to the laws of inheritance, and here we come to the third type.

As generation succeeds generation, and the country is subject to change of rule, stress of seasons, and accidents occur, leading to hardship to individual co-partners; or some die off, others leave the village; some get involved in difficulties, others, mortgage their properties; it can be conceived that mutations would follow which would increase the holdings of some, while others being unable or unwilling to succeed to lapsed shares, additional reason would appear for not disturbing possession and resorting to the law intimes when little attention was paid to rights and the influential could generally do as they pleased. In such a state of things it is easy to see how ancestral shares would die out, and customary shares take their place which would agree with the land actually held by each co-partner. Villages of this class would represent the fourth type.

Ultimately all resort to shares dies out; there may have been money settlements in former days; poverty may have driven out the old proprietors who may have been succeeded by cultivators, located by the Kardars; the land may lie near a large town and have become so valuable as to have utterly changed hands; or, if still belonging to the old brotherhood, owing to distress, misrule and a hundred causes they found it their best interest to make each man's occupancy the rule of his

interest in the estate; or men of different castes may have become owners by original or subsequent appropriation; whatever was the cause, there is no trace of any kind of shares, the village custom is to throw the liabilities on the total area cultivated by each person. This takes us into the last stage. Generally it is to some accident or defect in succession that this tenure may be attributed, so I have termed it the "Accidental stage".

Under the classification usually prescribed the two first would comprise all tenures held in common, known as "*Zamindari*" or what is popularly termed "*Shamilat*" or "*Sanji*" in this district. The third and fourth would take in "*Pattidari*", whether (perfect) completely divided, or imperfect in which the land actually held by the brotherhood was formally divided, and the rest held in common. In the last I have kept only such estates as are "*Bhaiachara*" or what I understand to be "*Bhaiachara*," viz., where possession is the sole measure of right and responsibilities, and land is held completely on severalty, whether ever subjected to final division in previous day or not."

3. The Villages held on a patriarchal (perfect *Zamindari*) tenure, are all or nearly all lately formed estates, some of them uncultivated and recently and recently known as *rakhs*. They have not yet had time to pass to any other stage. Most of those held on a communal or joint-stock tenure are villages in which the owners are certainly recorded as co-holding, but in which for convenience of cultivation, they have, pending a permanent partition, agreed to hold and cultivate portion temporarily. It is only in isolated cases that there would be an amicable division of the whole produce according to ancestral shares. The bulk of the estates are shown as held on a *pattidari* tenure which must be considered rather as a negative description, and as meaning that the village has not yet reached the stage in which each man's possession is the sole measure of right. It includes many various forms, in which the original shares are becoming more or less obscured and departed from. Cases are now very

Extent to which each form of tenure prevails.

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rare in which the purest form of pattidari tenure is met with i. e., that in which each man's holding closely corresponds with what he is entitled to by inheritance, and in which there is no commonland left to partition. It is recognised that the days are past in which Courts would decree, or the whole brotherhood consent to, equalization of the land which had come down to the community from a common ancestor. Land has become too valuable and it is hopeless to expect a man to give up a part of his land, even when it is proved that he holds more than his share. The most that would be conceded by those who hold more than their share, is that when the common land came to be divided something should be done in the way of compensating by a large allotment those who had failed to retain their full share in the divided land, and even this concession would only be agreed to in cases where the relationship between the parties was very close. And if pure pattidari is becoming rare, pure bhaiachara or possession tenure, in which all land has been divided up and both right and liability is governed by possession, is almost equally gaining. In very many bhaiachara estates there is some land still recorded as held in common, but the owners generally agree to partition according to the amount of the land revenue paid by them, or according to the land possessed by them, the former method being the more common. Near the city, where land is most valuable, the drift towards the bhaiachara tenure is most observable. The taking up of land for roads, railways and canals, has done much towards obliterating shares. Those who had to give up the land received the compensation at the time, and the recollection of this fact leads the rest of the co-sharers to resist any overtures towards equalization. In such cases the only course open is to declare for a bhaiachara tenure.

The district has long been under cultivation, and little clue can now be obtained as to the mode in which the land was originally appropriated and parcelled out by the different communities. The difficulty of tracing this out is increased by the fact that the reports of early revisions of assessment are either meagre or altogether non-existent. The nature of the

processes must be left to conjecture by analogy from observing what has been done and recorded in other more recently peopled tracts. It has been thought sufficient to indicate the stage at which the district has arrived without attempting to pursue the enquiry further back.

4. There is little to notice under the head of proprietary tenures. It is recognised that each man has full proprietary right in his holding, and can do what he likes with it, subject only to the provisions of the law of preemption. But the idea is one of foreign growth, and the feeling is still strong that one member of a family has strictly no right to dispose of his holding to the possible detriment of other members. A childless widow has of course only a life interest in her husband's estate, and suits are often brought to restrain a childless proprietor from parting with his property. But land is now freely sold and mortgaged.

5. Holdings are daily becoming smaller throughout the district, and the pressure on the land is much felt. The average area of cultivated land to each *malguzar* or co-sharer responsible for the revenue is 4·8 acres in Amritsar and Tarn Taran, and 3·7 acres in Ajnala. Fifty years ago the figures were eight and six acres. It is, however, somewhat difficult to give by means of an average an idea of the real size of holdings in different parts of the district. In the Arain villages of Ajnala, and in some of the Jat villages in Amritsar, the holdings are painfully small, and of themselves do not provide sufficient means of subsistence for the owners, who have to rent other lands from their more fortunate brethren.

6. There are only a few scattered instances of *talukdari* tenures in Amritsar. They are mostly found in Rajput villages, to the owners of which the proprietors of a neighbouring village pay small fixed sum yearly, or a nominal percentage on their revenue. It is rarely more than five per cent. Enquiry usually shows that those who pay this *talukdari* allowance were originally settled by

the superior owners as tenants, and gradually acquiring too firm a hold on the land to be ousted, were recognised at the regular settlement of 1852 as having proprietary right, subject only to the payment of a nominal sum as *malikana* to the superior owners. It is paid in addition to revenue. Two whole estates in Ajnala, part of one in Amritsar, and three plots in the civil station are held on an *inkita malguzari* tenure, the proprietors having compounded for the revenue when they bought the land from Government. No other special forms of tenure are found in the district.

7. The special riparian customs, which used to exist in the district, have now almost entirely vanished. At the third regular settlement (1892) all but two villages on the Ravi had fixed boundaries, and in these two a permanent boundary with the Sialkot district was laid down by Mr. (afterwards Sir Edward) MacLagan in 1903. The boundary with Kapurthala State was formerly fixed every year in accordance with special rules, but in 1902 a permanent boundary was demarcated by Mr. B. H. Bird, I. C. S. as the representative of the Punjab Government and Diwan Hari Chand on behalf of the Kapurthala Darbar. During the course of the latest settlement no special delimitation of boundaries was necessary, but discrepancies discovered in the maps of adjoining riverain villages in the course of the Survey Department's traverse were reconciled.

8. There is a ready explanation for the paradox that in an admittedly congested district of smallholders, only 46.6 per cent of the landowners cultivate their own land. The district is undoubtedly a tract of small cultivating owners but the land they cultivate is not always their own. The person who pays the revenue on land does not always own it and the owner may sometimes not be regarded as such for statistical purposes even when cultivating his own land. A mortgagee, particularly if he is a non-agriculturist, will often put the mortgaging owner back on the land as his tenant. Statistically the mortgagee is then regarded as the owner, the owner as a tenant, and the land goes to swell the area held in

tenancy. There are other cases where owners exchange land for facility in farming without going so far as formal transfer of ownership ; and in such cases each appears statistically as the tenant of the other. But basically, Amritsar is a district of crofters with a proprietary interest in the soil.

Privileged tenants occupy 8·6 per cent of the cultivated area - 6·6 per cent in occupancy right and 2 per cent in less permanent forms of indulgence inspired by kinship or financial bondage or even some shadow of proprietary title.

Commercial rents are taken on 44·8 per cent of the land, grain on 33·2 and cash on 11·6 per cent. Cash rents have been falling out of favour for many years. The grain rent has of course the great merit of flexibility and automatically adjusts the burden of a bad harvest or low agricultural prices; that is, of course, where it is taken as an agreed share of the crop (*batai*). This is the common form of grain rent. A fixed maundage per acre (*chakota*) is much less popular.

9. The tenants with a right of occupancy fall into two classes. In the first are those who are recorded as having occupancy rights under sections 5, 6 and 8 of the Punjab Tenancy Act. These are known as *dakhilkar* or popularly as *maurusi*. In the second are those who are recorded as having received protection from ejectment or *panah* and these are styled *panahis*. The arrangement by which they were given this protection was made at the settlement of 1865, and the period of protection, which was fixed with the aid of assessors after consideration of each case, may be for an indefinite term (*panah kadim*), for one or two lives, for such time as certain specified service is performed, and so forth. There are many and various such conditions. In practice all but the best informed of the landlords regard the rights of all classes as identical; they are in common parlance all called *maurusi*, and all pay rent at much the same rates. The usual rent is a sum equal to the revenue and cesses of the holding plus a small *malikana* or landlord's due, which varies from one to four annas in the rupee of revenue. Many however have

Occupancy and
protected
tenants

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had their rents enhanced by decree, and some pay a rent equal to double the revenue, which is not far short of what is paid by tenants-at-will.

10. Tenants-at-will, as already stated, are usually jats themselves owning land, members of the industri-
 Tenants-at-will. ous Arain and Kamboh tribes, or else village menials and artisans. Land is in most cases let for a year, the tenant entering from the *Kharif* harvest, or say from 15th June. The letting of the land has previously been arranged for in the month of *Chet* (March-April), while the *rabi* crop is ripening; and little field work is being done. Near the city, where on market-gardens the rotation of crops takes twenty-two months to complete, land is often let for two years. It may even be let for a period of ten years, so as to allow the tenant the benefit of the expensive manure he puts into the land. But these are rather lessees than tenants-at-will. With yearly tenants, rent is paid half-yearly in arrear, as a rule, at the same time as the revenue. It is remarkable to what an extent *kamins* (village menials) have of late years taken to cultivation in Amritsar. They either carry on their own trade at the same time, or leave it and take to cultivation alone. They are most often found cultivating on *barani* soils, not having the capital to cultivate irrigated land, and not being allowed much access to it if they had. Thus they have leisure to pursue their own trade or calling, while the crop is growing. As they live cheaply, and as competition is keen they are ready to pay high rents, and it is chiefly owing to them that rents within the last twenty years have been pushed up to their present height. Rents may be paid in cash or in kind, or partly in one form and partly in the other. Fifty years ago cash rents were the more popular form in the greater part of the district (Ajnala tahsil and the Bet Bangar circle of Tarn Taran tahsil being exceptions) but there has been a steady swing towards grain rents which now predominate throughout the district. This tendency has been accelerated by the calamitous fall in agricultural prices ten years ago and probably by the increasing security of the district. The return is certain on irrigated soils where serious failure of

Tahsil.	Demand in rupees.	Rate per cultivated acre.		
		Rs.	A.	P.
Tarn Taran	2,75,687	1	0	9
Amritsar	4,32,446	1	15	11
Ajnala	2,74,260	2	3	5
Total, district	9,82,393	1	10	1

Prices, which had been falling while the settlement was in progress, continued their downward trend and it soon became apparent that the new demand in Ajnala was too severe. Cultivators began to abandon their holdings and balances accumulated. In 1859 a revision of the assessment was undertaken which gave relief to 128 villages and, with reductions sanctioned by the Chief Commissioner in 1858, permanently reduced the demand by some thirty-six thousand rupees in that tahsil.

15. The term of Mr. Davies' settlement was ten years and its revision was undertaken in 1862 by Mr. E. A. Prinsep, Settlement Commissioner, whose assessment was imposed from *khari* 1855. Mr. Prinsep wrote no report on his operations and his inspection notes are generally based on statistical information and rarely on a personal visit to the estate concerned. He came to his task with the impression that the expiring settlement had worked very fairly but that its distribution was faulty owing to the mechanical treatment of villages which had been produced by excessively minute classification, and its irrigated villages too highly assessed owing to undue optimism about the capacity of wells. His broad classification of estates was based on his regarding them as fully or fairly cultivated or backward, and lenient treatment of wells was a feature of the settlement. The assessment was imposed in the form of a soil rate on land in its unirrigated aspect plus a lump sum per well. In addition a water-advantage rate was imposed on land irrigated from the canal (which had been opened in 1860) at the rate of one rupee an acre for irrigation

Second regular settlement.

in one harvest of the year with eight annas more for land irrigated in the second harvest. The reassessment resulted in an immediate reduction of the demand and even when the deferred assessments amounting to Rs. 33,821/- came into effect ten to twenty years later the ultimate demand was very little more than the revised demand of the first regular settlement. The actual figures exclusive of water advantage rate are .—

Tahsil,	Demand in rupees.	Rate per cultivated acre,		
		Rs.	As.	P.
Tarn Taran ...	Rs. 2,92,323	0	15	8
Amritsar ...	4,15,315	1	10	8
Ajnala ...	2,42,624	1	10	11
Total, district ...	9,50,262	1	5	11

Mr. Prinsep's settlement aroused considerable controversy and, though it worked well on the whole, had to be revised in thirty-nine estates in the Sailab and Hithar circles of Ajnala where a permanent reduction of Rs. 5,338/- was sanctioned in 1880. The inelasticity of the water-advantage rate and insufficient differentiation from circle rates in the assessment of wells were flaws in the settlement; but the major difficulty was the progressive enhancements which were in many cases utterly misconceived. Optimism about potential expansion generated by statistics was falsified by infertile soil which was not worth the trouble of cultivation.

16. The settlement was sanctioned for twenty years but ran for several more. The third regular settlement was carried out by Mr. J. A. Grant between 1888 and 1893. The feature of this settlement was the introduction of a differential soil rate known as *nahri parta* to represent the advantage conferred on unirrigated land by the canal. This method of assessing irrigation has held the field ever since. Apart from this Mr. Grant seems to have followed the general principles of assessment then approved without any

Third regular
settlement.

special orders for the district except a bias on moderation. The assessment actually imposed increased the demand which for various reasons had by this time risen to Rs. 10,26,681, by 22 percent and was :—

Tahsil.	Demand in rupees.	Rate per cultivated acre,		
	Rs.	Rs.	As.	P.
Tarn Taran	4,00,483	1	3	10
Amritsar	5,36,644	1	14	6
Ajnala	3,17,088	1	14	9
Total, district	12,54,215		10	1

This settlement which was sanctioned for a term of twenty years worked smoothly in the Tarn Taran and Amritsar tahsils and in the *Nehri* Circle of Ajnala. Some of the weaker villages in the Uthar circle found occasional difficulty in paying their demand and in the Hithar and Sailab circles it was constantly in arrears. This tract experienced a series of misfortunes which it was impossible for the settlement officer to foresee but it appeared that even in a normal year their demand was relatively severe. It is, however, only fair to Mr. Grant to point out that the assessment he proposed was considerably lighter than that actually announced as his rates were substantially enhanced by higher authority.

17. The fourth regular settlement of the district was carried out by Mr. (afterwards His Excellency Sir Henry) Craik between 1910 and 1914. He came to the settlement armed with very definite instructions from the Central Government about the enhancement he should take and, as he implies in one of his assessment reports, Government's share of the net assets was so much more than he was permitted to take that his only problem was the equitable distribution of this smaller enhancement over the three tahsils. Unfortunately a misinterpretation of the orders of the Government of India, which was not corrected until the demand

The expiring
settlement.

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in Tarn Taran had been announced, left the other two tahsils (and in particular Amritsar) to bear rather more than their fair share of the increase though not by any means nearly as much as could have been taken had the settlement officer's discretion been restricted by the letter of the law alone. The Government of India had directed that whatever enhancement the net assets might justify the old demand should not be increased by more than 25 per cent. The misunderstanding arose about the figure to which this enhancement was to be related and when the Government of India ruled that it might be calculated on the initial and not the ultimate new demand provided that the total assessment did not exceed Rs. 16,07,000/-, the Punjab Government naturally did not wish to lose the additional revenue which this decision gave them and directed that Rs. 11,000/- more be taken in the Amritsar tahsil (which Mr. Craik regretted) has been a factor in determining the pitch of my reassessment of this tahsil. The ultimate demand imposed on the district was an increase of 26 per cent on the expiring demand distributed as follows :—

Tahsil	Demand in rupees.	Rate per cultivated acre.		
		R.	s.	p.
Tarn Taran ...	Rs. 5,39,816	1	11	3
Amritsar ...	7,07,721	2	8	8
Ajnala ...	3,50,394	2	4	6
Total, district. ...	15,97,931	2	2	1

The settlement, sanctioned for twenty years, has worked well. The moderation of the demand in Tarn Taran has always been recognised and the revenue was paid with ease so long as agricultural prices remained above the level of commutation prices. In Amritsar too until the exceptional fall in agricultural prices ten years ago no remissions were required on account of the severity or faulty distribution of the demand. In Ajnala tahsil the real test of the working of the settlement is suspensions and not remissions. These have been more liberal than

in the other tahsils but, for Ajnala, comparatively light. There is, however, reason to suspect that more flexibility or failing this, a lighter assessment is expedient in the weaker parts of this tahsil. The people are reluctant to accept suspensions even at some hardship to themselves because their recuperative ability is so slight that the subsequent addition to their liabilities will be intolerable.

18. By the operation of various factors, principal among which have been river action and changes in the *nahri* area, the demand imposed at last settlement has slightly changed and the amounts for collection now are :—

Tahsil	Demand in rupees.	Of which demand in Urban and Suburban Circles is Rs.
Tarn Taran ..	5,50,408	1,075
Amritsar -	7,10,630	85,058
Ajnala ..	3,54,907	
Total, district	16,15,945	86,133

19. Reassessment was begun in October 1936 and completed in December 1940. The Settlement Officer was Mr. A. MacFarquhar, I. O. S. Full details about the revision of records and of assessment appear in the assessment reports of the three tahsils and the final settlement report of the district, from which the material for the rest of this section has been taken. It should be remembered that the Urban and Suburban circles were excluded from operations and will not be reassessed until 1945, so that the expiring demand for comparative purposes is Rs. 15,29,812/-.

20. The expiring settlement should have completed its term in 1932-33 and the preparation of a forecast report was therefore taken up early in 1929. The reporting officer found little increase in cultivated area or in population; a development in road communications;

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a rise in prices but little surplus of grain for export; and a remarkable rise in cash rents and the sale value of land which had however not been maintained in the latest years of the period on account (he thought) of the increase in occupiers' rates of some three lakhs of rupees which had been effective since 1924. He found a very general complaint of recent shortage of rains and failure of crops and an equally general desire for postponement of re-assessment. He took the effective rise in prices to be 30 per cent (statistically they had risen 70 per cent) and calculated the amount available from other increases in resources by deducting the existing demand from the sum obtained by applying the settlement rates to the cultivated area at the time of the forecast. He concluded that throughout Tarn Taran and Amritsar tahsils the maximum permissible increase of 25 per cent could be taken (the calculated improvement in strength ranging from 1 to 10 per cent more). In Ajnala he recommended enhancements between 20 and 25 per cent in different circles. The permissible enhancement at one quarter of net assets came to much more 49 per cent over the district as a whole and 58 per cent in Tarn Taran, 38 per cent in Amritsar and 55 per cent in Ajnala.

In passing orders on this report Government agreed that a case for reassessment had been made on the statistics of the rise in prices of agricultural produce and on the increase in the cultivated area of the district was small. The satisfactory rise in the value of land was held to indicate the advantages accruing from higher agricultural prices. Government however found some temporary conditions which required consideration in determining when to start reassessment : "the first of these is the fact that the district has recently passed through a series of bad or sub-normal harvest ; and from this point of view the present time is inopportune for starting reassessment operations. The second feature is the fact that the pitch of the occupiers' rates, which was light in the schedule formerly applying to this district, was substantially raised in 1924-25. This change has naturally reached in the rental arrangements of irrigated lands in the district, which from the point of view of reassessment is

an important class of soil in this district. These two factors combined point to the desirability of allowing some further period of time to elapse so as to allow rental arrangements to become more stabilised and to give surer data for determining the amount of additional advantage which the land-holder derives from the higher range of prices. It was therefore decided to postpone reassessment for five years; and operations were actually not begun until October 1936. Caution was perhaps never quickly justified of her child, for agricultural prices broke badly soon after these orders were passed and were still low when settlement operations started.

21. The assessment of land revenue is based on the average value of the net assets of the unit under assessment. These net assets are defined by statute as the estimated average annual surplus produce remaining after deduction of the ordinary expenses of cultivation as ascertained or estimated. The explanation appended to this definition leaves no doubt that these assets are determined not on the profits of cultivating occupancy but on rentals. The rules require that two estimates of net assets shall be framed one based on grain rents and the other on cash rents. Before this stage is reached two preliminary points have to be settled—the units to be recognised for estimates and the classes of land within those units whose return in grain or cash is sufficiently different to require separate ascertainment.

22. The unit is the assessment circle, a group of estates sufficiently homogeneous to admit of a common set of rates being used as a general guide in calculating the land revenue to be assessed upon them. The last settlement officer retained unchanged the arrangement of circles approved in the third regular statement but in the course of assessment found certain defects in the grouping which led him to suggest important changes in Amritsar tahsil. These had no practical effect on the actual assessment of the tahsil but the regrouping was formally recognised by the arrangement of the village note-books in accordance with it and in a statistical statement published as

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appendix II of his Final Report. I have not disturbed these circles except in so far as this was necessary to provide for urban circles at Amritsar and Tarn Taran in consequence of changes in the revenue law and to extend the suburban circle in conformity with development in the neighbourhood of Amritsar city. In the following statement I have included for the sake of completeness these urban and suburban circles but as already explained their reassessment was not undertaken in this settlement.

Tahsil	Assessment circle	Number of estates
Tarn Tarn	Upper Manjha	160
	Central Manjha	167
	Bet Bangar	28
	Tarn Taran urban	1
Total, Tahsil		356
Amritsar	Bet Bangar	88
	Jandiala	124
	Nahri	128
	Mirankot	27
	Suburban	12
	Amritsar urban	10
Total, tahsil		387
Ajaak	Sallab	78
	Hithar	79
	Uthar	117
	Nahri	78
Total, tahsil		347
Total, district		1,090

23. Within these circles it is necessary to determine what classes of land should be recognised. Distinctions based on irrigation or lack of it have always been recognised as suitable in this district and the

Classes of
land.

definitions approved for this Settlement followed tradition. These are : -

chahi :—land regularly irrigated from a well. In case of doubt if a field is shown by the *khasra girdawari* to have been so irrigated in two or more out of the last eight harvests and a permanent source of irrigation exists, it will be recorded as *chahi* ;

nahri :—land regularly irrigated from the Upper Bari Doab Canal. In case of doubt if a field is shown by the *khasra girdawari* to have been so irrigated in two or more out of the last eight harvests it will be recorded as *nahri*, provided that in no case will land be recorded as *nahri* if it comes within the definition of *chahi* ;

abi :—land watered from tanks, *jhils*, ponds or drainage channels ;

sailab :—land usually flooded in the rains by the Beas, Ravi or Sakki, or their branches, or land near these rivers which is always moist ;

barani :—all cultivation not included in the above classes. Land in the Hither circle of Ajnala tahsil regularly irrigated from the Kiran canal has been shown in the record as *nahri kiran* but this distinction is of no practical importance for assessment as the small area involved has always been rated as *barani*. The usual uncultivated classes *banjar jadid*, *banjar qadim*, and *ghairmumkin* as defined in rule 2(2) of the Land Revenue Assessment Rules 1929 also appear in the record.

These definitions are the same in substance as those adopted at last settlement with slight changes in the wording for *chahi* and *nahri* to satisfy uncertainty among landowners. A discussion of the grounds for preferring to class irrigated land as *chahi* where there is any doubt about the permanent source of supply will be found in the Tarn Taran assessment report.

24. The estimate of the net assets of each class of land in each assessment circle depends on the average acreage of each crop on it, the average yield per acre of such crops, the average price obtainable

The estimate of
net assets
based on
grain rents.

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for them, and the share of the gross produce taken by the land-owner.

The average acreage is determined by using the cropping statistics of a selected period of years of which the harvests are a fair sample of the ordinary fluctuacious characteristic of the agriculture of the tract. Other things being equal, the longer the period the more likely is the average to be a fair one and to neutralise abnormalities of season. In this district uniformity of other factors was lacking, for since last settlement there has been progressive expansion in artificial irrigation. This development became important about ten years after last settlement and after a further five years of uncertainty settled down to comparative stability in the decade ending 1935-36. Government made a substantial concession to landowners by the decision that the selected years should be the twenty years ending 1935-36.

Despite a multiplicity of statutory guides the appraisement of the average yields of crops remains the most elusive and speculative factor in the estimate. It causes the settlement officer most thought and gives him least satisfaction in his decision which cannot be confined within the virtuous continence of a scientific habit. A detailed account of methods appears in the assessment reports.

Investigation of the various data for prices is a tedious and thankless task, but when a conclusion had been reached about the most satisfactory source the settlement officer's troubles used to be at an end. Nowadays they only begin from this point owing to the catastrophic fall in agricultural prices ten years ago which brought the Province face to face with a situation for which there is no parallel in the last seventy years. It was met by *ad hoc* remedies applied to existing settlements which developed into the system known as the sliding scale for new settlements. Here, I need only draw attention to the difficulty created for the settlement officer by the divorce of his paper prices from any connection with current prices. However, the law demands it. The most reliable source of prices in this district was found to be the record made from harvest to harvest in the notebooks and they were used for determining what the commutation prices

should be. The prices approved for the whole district were :—

KHARIF									RABI					
Crop	rice	bajra	maize	moth	other pulses	oil seeds	gur	cotton	wheat	wheat straw	barley	gram	mixed wheat and gram (berrera)	oil seeds
Price in annas per maund)	47	44	45	60	70	110	88	130	55	6	36	50	52	88

For other crops a price per acre and not per maund was used and for them only lower prices were adopted for the inaccessible Sailab and Hithar circles of Ajnala tahsil than for the rest of the district. *Per contra* higher prices were taken for the Urban and Suburban circles but as they are irrelevant and will probably be changed when urban reassessment is actually done, I do not give them here. The prices in rupees per acre were :—

Crop	Tobacco	Irrigated kharif fodders	Unirrigated kharif fodders	Irrigated rabi fodders	Unirrigated rabi fodders	Fruit, vegetables and spices
Sailab and Hithar	60	18	12	22	15	30
Other circles	60	25	15	30	18	50

From acreage, yield and price, gross assets are readily ascertainable. Before the value of the owner's share can be determined a deduction has to be made on account of menials' dues which are taken out of the common heap of grain before its division between landlord and tenant. My calculations have been exhibited in detail in the assessment reports, Suffice it to say here that I consider a deduction of 8 per cent sufficient in all circles and on all classes of land except the Sailab and Hithar circles of Ajnala where a deduction of 9 per cent was made. The balance of the crop is divided between landlord and tenant at an agreed rate which varies from circle to circle and on different

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soils within circles. The owner's share is 47 per cent in the Tarn Taran tahsil as a whole, 46 per cent in Amritsar tahsil and 49 per cent in Ajnala tahsil. But for the produce estimate the share has been calculated in greater detail and the appropriate amount of the produce credited to the owner on each unit of estimate. Even at this stage the law requires some more adjustments to be made in this share of the produce before it becomes the owner's net assets giving him credit for any payments he may make which are properly debitable to his tenant and debiting against him any part of the revenue which tenants may pay on his account. In this district adjustments were required on account of occupier's rates, maintenance of means of irrigation and supply of seed, to all of which the owner at various places makes a contribution of different value which has been computed according to whatever the practice happens to be. What remains after these deductions is his statutory net assets.

25. A further guide to the value of these net assets is provided by the cash rents obtained by owners but as these have been steadily losing favour they are not of such importance as they used to be. Only 10.5 per cent of the cultivated area pays cash rents in Tarn Taran, 14.5 per cent in Amritsar and 3.2 per cent in Ajnala. The estimate is further vitiated by the fact that an arbitrary allowance has to be made for the difference between the current prices on which the rents are paid and the commutation prices on which they have to be calculated for the estimate. The mathematical relation between the two sets of prices is not necessarily or fully reproduced in the rise and fall of rents. Still for what it is worth the estimate has been made.

26. Between these two estimates a mean has to be struck to determine what should be taken as true net assets. It is certainly not the average of the two estimates for different factors colour them to a different extent in different circles and soils, and allowance has to be made as far as possible for all such elements of bias. The following statement shows how my estimate of true net assets compares with the assets calculated on grain and cash rents.

1	2	3	4
Tahsil	Quarter net assets estimate		
	Based on grain rents	Based on cash rents.	Accepted as true
Tarn Taran ...	12,05,182	12,34,383	11,90,500
Amritsar ...	11,92,336	10,86,502	11,36,000
Ajnala ...	6,43,862	7,11,163	6,59,000
District ...	30,41,380	30,32,048	29,85,500

These estimates were accepted without comment for the Tarn Taran and Amritsar tahsils, but in Ajnala Government thought it imprudent in view of the relative unimportance of cash rents and the uncertain statistical base of those that do exist, to assume more than the result of the produce estimate as the value of the true quarter net assets.

27. In approaching the re-assessment of the Tarn Taran tahsil I found my liberty of action somewhat fettered by the generosity of last settlement which anticipated the present legal standard of assessment and took only 23 per cent of their true net assets from landowners. The operation of section 51 3) of the Land Revenue Act restricted the permissible new demand to 14·1 per cent of net assets. I had, however, no desire to go higher than this (in one circle I took considerably less) for while the tahsil had advanced considerably in security with 81 per cent of its cultivated area protected by irrigation and considerable miscellaneous resources, there were unmistakable signs of a recession from prosperity. Ten thousand acres had gone out of cultivation since settlement, rainfall had dwindled and canal supplies had been reduced. Population had increased by 35 per cent. Other levers towards moderation on which no exact value could be placed were the military tradition of the tahsil and the inevitable strain of adjustment to a new rural economy which agrarian legislation was likely to impose. I recommended an assessment of Rs. 6,64,726/-. All my proposals were accepted by Govern-

Assessment of
Tarn Taran
tahsil : (i)
general con-
siderations.

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ment. The new demand will be introduced with effect from rabi 1945.

28. This circle is on the whole the strongest in the tahsil.

Assessment of
Tarn Taran
tahsil : (ii)
Upper Manjha
circle.

It is advantageously situated on canal channels ; wells are generally sweet ; and communications are good I thought it just to take the highest percentage of net assets in the tahsil from this circle.

The effect of the re-assessment will be clear from the following figures :—

old demand	...	...	Rs. 2,46,956
new demand	(proposed	...	Rs. 3,05,052
	(sanctioned	..	Rs. 3,05,052
	(imposed	...	Rs. 2,99,020
incidence per cultivated	(old	..	Re. 1-15-11
acre	(new	...	Rs. 2-7-1
percentage of increase	..	—	21
percentage of true net assets absorbed	—	—	5

29. This circle is not so well situated in respect of canal

Assessment of
Tarn Taran
tahsil : (i)(i)
Central Manjha
circle.

irrigation or rainfall. It shows a greater decline in its cultivated area and more deterioration from *Kalla* than the Upper Manjha. Well water is very brackish in parts of the circle. The following

statistics show the result of re-assessment :—

old demand	...	...	Rs. 2,62,420
new demand	(proposed	...	Rs. 3,19,044
	(sanctioned	...	Rs. 3,19,044
	(imposed	...	Rs. 3,21,950
incidence per cultivated	(old	...	Re 19-9
acre	(new	...	Rs. 2-0-3
percentage of increase	..	—	23
percentage of true net assets absorbed	..	—	13

30. This circle is much weaker than the rest of the tahsil.

Assessment of
Tarn Taran
tahsil : (iv)
Bet Bangar
circle.

The river makes for unstable agr.culture and the soil on the cliffs immediately above is distinctly inferior. Little more than half of the cultivated area receive irrigation ; wells are deep ; pressure

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of population is heavy ; and the proprietary body is weak. A lenient assessment was obviously desirable and has been given as the following figures show :—

old demand	...	—	Rs. 39,952
new demand	(proposed	...	Rs. 40,630
	(sanctioned	...	Rs. 40,630
	(imposed	...	Rs. 41,305
incidence per (old	...	...	Re. 1-6-9
cultivated (
acre (new	...	...	Re. 1-10-1
percentage of increase	...	...	3
percentage of true net assets absorbed	...	...	12

31. The incidence of assessment in Amritsar tahsil has always been heavier than in Tarn Taran. The last settlement officer endeavoured to correct this anomaly but his plans were upset by the receipt at a late stage of orders from the Government of India which added eleven thousand rupees to the demand of Amritsar tahsil. The difference in prosperity between Amritsar and Tarn Taran does not justify the perpetuation of this inequality in assessment and its elimination was one of the major considerations affecting the pitch of the new demand. There were other indications of the necessity for a cautious assessment. Some part of the addition of one hundred and sixty four lakhs of rupees to the mortgage debt of the tahsil since last settlement represents greater economic embarrassment. The cultivated area including new fallow has contracted by some 3,500 acres since settlement of which failing scientific reclamation some fifteen hundred acres can be regarded as a permanent loss. Regular and adequate rain is essential in a tahsil where a quarter of the cultivated area still depends on natural irrigation and where considerable other areas irrigated by wells and *kharif* channels need some supplement from nature. Perennial supplies of canal water have been reduced by twelve per cent since settlement. Population has increased by 19 per cent and brought with it a contraction in the average size of holdings. An upheaval in the system and agency of rural credit also dictated caution. On the other hand the tahsil has considerable investments in land in the Punjab colonies and

Assessment of
Amritsar tahsil
(i) general con-
siderations.

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outside the province, and a steady income from pensions and remittances. Section 51(3) of the Punjab Land Revenue Act would have permitted me to take 17·3 per cent of the true net assets. I recommended an assessment of Rs. 6,94,990/- absorbing 15·3 per cent of true net assets. All my proposals were accepted by Government. The new demand will be introduced with effect from *kharif* 1945.

32. This circle has lost twelve hundred cultivated acres since settlement and nearly a quarter of what remains is unirrigated. Its population shows the highest rate of increase and its holdings are the smallest in the tahsil. On the other hand the soil though light is generally fertile and irrigated cropping is nearly half as much again as it was at last settlement. The proprietary body is strong and statistics of transfers shows less land mortgaged than in any other circle and the greatest improvement in the value of land since settlement. A fairly full assessment was possible. The following figures show what was done :

Assessment of
Amritsar
tahsil (ii) Bet
Bangar circle

old demand	...	...	Rs. 1,41,317
	(proposed	...	Rs. 1,54,442
new demand	(sanctioned	...	Rs. 1,54,442
	(imposed	..	Rs. 1,54,485
incidence per	(old	...	Rs. 2-2-8
cultivated	(
acre	(new	...	Rs. 2-6-3
percentage of increase	..	...	9
percentage of true net assets absorbed		...	17

33. The soil of this circle varies from a good sandy loam to very poor sand. Only twelve estates receive canal water and as much as forty-one per cent of the cultivated area is unirrigated. Agricultural results are, therefore, apt to be uncertain. The circle is sparsely populated but even so a cautious assessment was expedient. The following statistics show that the necessary moderation has been exercised :—

Assessment of
Amritsar tahsil
(iii) Jandiala
circle.

old demand	—	...	Rs. 1,92,868
	(proposed	—	Rs. 1,97,592
new demand	(sanctioned	—	Rs. 1,97,592
	(imposed	...	Rs. 1,98,150

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incidence per (old	Rs. 2-3-6
cultivated (
acre. (new	Rs. 2-4-5
percentage of increase	3
percentage of true net assets absorbed	13

34. Defective drainage is the bane of this circle and considerable stretches of land are impregnated with *kallar*. Thirteen hundred acres have gone out of cultivation since settlement and further deterioration is possible. The pressure of population is the heaviest in the tahsil. On the other hand only four out of one hundred and twenty-eight estates are without canal water and only ten per cent of the cultivated area is unirrigated. There has been a steady improvement in cropping and the value of land as a commodity is well ahead of anything obtainable elsewhere. The circle is on the whole the strongest in the tahsil and a fairly full demand was possible. The following statement shows the actual results of reassessment :—

Assessment of
Amritsar tahsil
(iv) Nahrī
circle.

old demand	Rs. 2,50,510
(proposed	Rs. 2,99,638
new demand (sanctioned	Rs. 2,99,638
(imposed	Rs. 2,97,325
incidence per (old	Rs. 2-13-0
cultivated (
acre. (new	Rs. 3-4-10
percentage of increase	19
percentage of true net assets absorbed	21

35. This is far and away the poorest circle in the tahsil. Where the soil is not light and sandy it is as often as not sour and *kalrathi*. Half of the estates receive no canal water and a quarter of the cultivated area is unirrigated. There has been no improvement in agricultural results. Holdings are comparatively large but sales and mortgages have been very considerable. The value of land is low and the expiring assessment, tested by the consideration paid for mortgages, relatively heavy. A lenient assessment was necessary and as the following figures show my demand took every account of this :—

Assessment of
Amritsar tahsil
(A) Mirankot
circle.

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old demand	Rs. 40,817
new demand) proposed	Rs. 43,318
) sanctioned	...	—	Rs. 43,318
) imposed	Rs. 43,050
incidence per	) old	...	....	Rs. 2-5-8
cultivated)			
acre	) new	...	...	Rs. 2-6-9
percentage of increase	...	...	...	5
percentage of true net assets absorbed	....	...	...	15

36 The assessment of Ajnala tahsil has always been the most difficult problem in the fiscal arrangements of the district. Nature's caprice has time and again falsified man's mathematics and taught him how little he knows of moderation. The demand which over a series of seasons is well within the capacity of the people to pay may prove so harsh in a single bad year that a return to solvency is almost impossible. Such distress is not universal, for certain areas are comparatively prosperous, but the cogent arguments of experience requiring an abandonment of soothing theory are concerned with broad practical issues. The cultivated area has increased by some eight thousand acres since last settlement but is now no more than it was fifty years ago; and half of the increase since last settlement has to be discounted in assessing permanent progress for it depends on the whim of the river. With some 65,000 acres (24 per cent of the total area of the tahsil) still "available for cultivation" it might be imagined that there was a margin of safety in potential development. But this fallacy was exposed in Mr. Prinsep's settlement and his severe assessments on "backward" villages (i.e. estates in which there was much uncultivated land) are unlikely to be repeated. Much of the land which still awaits the plough is inferior stuff and scientific advice should precede its reclamation. There are other weaknesses. The tahsil is less protected by artificial irrigation than its neighbours and it has no advantage in rainfall which would justify confidence in its ability to do without artificial supplies of water. Communications are poor and access to markets difficult for the trans-Sakki tract. Pressure of population is the heaviest and the holdings the smallest in the district. Where

Assessment of
Ajnala tahsil
a) general con-
siderations.

agricultural conditions are least favourable, the proprietary body is least able to cope with them. More land has been sold and mortgaged than in either of the other tahsils, more of it has passed into the hands of non-agriculturists and prices are much lower. Mortgage debt has increased threefold since settlement. A considerable measure of lenience is thus expedient in determining the assessment of the tahsil as a whole with a considerable discrimination between the strong cis-Sakki portion and the wretched trans-Sakki circles. I recommended an assessment of Rs. 4,09,973/- which would have absorbed 15·6 per cent of the true net assets against a permissible of 17·9 per cent. As explained in the assessment report some of the figures were provisional as measurement had not been completed when the report was submitted. On the final figures the permissible demand under section 51 (3) of the Punjab Land Revenue Act (Rs. 4,74,350/-) is 18 per cent of the true net assets and the demands brought out by the proposed soil rates become Rs. 1,46,084/- in the Nahri circle, Rs. 1,58,458/- in the Uthar, Rs. 55,883/- in the Hithar and Rs. 54,437/- in the Sailab, a total of Rs. 4,14,862/- for the tahsil.

It was recognised that my proposals involved a considerable sacrifice of revenue—they took for the State only 87 per cent the permissible demand—but with the adoption of my produce estimate as the true net assets and their consequent reduction by some Rs. 15,000/- even greater generosity was thought to be demanded by the condition of the tahsil and its comparative taxable capacity. I was therefore instructed to work to a demand of Rs. 3,99,000/- round and was given complete discretion in the distribution of the reduction. I did not alter any of my soil rates in consequence of these orders but took advantage of them to reduce my provisional demands in peculiarly weak estates and in estates where the enhancement would otherwise have been steep. The new demand will be introduced with effect from *Kharif* 1945.

37. This is the strongest circle in the tahsil. The cultivated area has increased since settlement and there are nearly three thousand more irrigated acres. As much as 94 per cent of the cultivated

Assessment of
Ajnala tahsil—
(ii) Nahri circle.

area is protected by canal or wells. The proprietary body is strong and holdings are larger than in other circles. On the other hand the pressure of population exceeds anything found in any other circle of the district. The effect of reassessment will be clear from the following figures :—

old demand	—	Rs. 1,20,025
new demand {	proposed ...	Rs. 1,46,084
	imposed ...	Rs. 1,40,600
incidence per {	old ...	Rs. 2-12-8
	cultivated acre { new ...	Rs. 3-1-5
percentage of increase	..	17
percentage of true net assets absorbed	..	15

38. This circle is somewhat inferior to its eastern neighbour. The soil is lighter and facilities for irrigation are not so good. The wells on which half of the cultivated area relies are deep and part of the canal supply is non-perennial. The pressure of population is lighter but still heavy. The following statement shows what has been done :—

Assessment of
Ajnala tahsil -
(iii) Hithar circle

old demand	...	Rs. 1,30,456
new demand {	proposed ...	Rs. 1,58,458
	imposed ...	Rs. 1,49,055
incidence per {	old ...	Rs. 2-7-2
	cultivated acre { new ...	Rs. 2-9-7
percentage of increase	—	14
percentage of true net assets absorbed	...	15

39. This is a much weaker circle in which there is no regular canal irrigation. A third of the cultivated area is barani. Much of the soil is inferior and *kalrahi*. The sown area has declined and there is little variety of cropping. Holdings are small and stock poor. The proprietary body is neither strong nor homogeneous. It would not have been prudent to go too near permissible demand and actually my soil rates are all lower than those of last settlement. The increase in demand which the following figures show is due entirely to an increase in the cultivated area—the incidence per cultivated acre is actually less than before.

Assessment of
Ajnala tahsil -
(iv) Hithar circle.

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old demand	Rs. 51,560
new demand	{ proposed	...	Rs. 55,883
	{ imposed	...	Rs. 54,425
incidence per cultivated acre	{ old	...	Rs. 1-14-7
	{ new	...	Rs. 1-14-3
percentage of increase	...	..	6
percentage of true net assets absorbed	...	...	17

40. This is unquestionably the weakest circle in the district. A few estates are strong and fairly prosperous but the majority are poor places where existence is precarious and poverty obvious. More than half of the cultivated area relies for moisture on the river which is unfettered by any natural embankment in this district. The sown area is four thousand acres less than it was at last settlement, failure is heavy and there is no variety of cropping. Communications are poor, the proprietary body is weak and holdings are small. The only error in assessment should be lenience.

I had to consider whether the fixed system of assessment should give way to a fluctuating demand. Statistics favoured the change, for while in the course of the selected years the cultivated area has varied within a range of five thousand acres the range in the matured area has been as much as fifteen thousand acres. The *sailab* cultivated area which is the assessable area in its class under the fixed system of assessment has swung between sixteen and twentyone thousand acres, while the *sailab* matured area which provides the money to pay the assessment has been as low as ten thousand acres and on average sixteen per cent less than the cultivated area. I consulted the headmen and zaildars of the estates which pay most of the revenue and as they unanimously favoured retention of a fixed demand (with improved dialluvion rules) I recommended no change in the system.

The result of reassessment appears in the following figures, from which it will appear that the new demand is lighter than the old in its incidence on cultivation.

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old demand	Rs. 52,857
(proposed		Rs. 54,437
new demand	(imposed Rs. 53,500
(old	...	Re. 1-11-2
incidence per cultivated acre	(new	... Re. 1-9-5
percentage of increase		1
percentage of true net assets absorbed		16

41. The following statement shows that re-assessment has increased the annual revenue of the district at commutation prices by Rs. 2,22,077/- The new demand appears as reduced on objection or appeal upto the Commissioner.

Tahsil	Old demand (in rupees)	New demand (in rupees)	Amount of increase (in rupees)	Percentage of increase	Percentage of true net assets absorbed	Percentage of permissible demand under section 51 of Land Revenue Act
Tarn Taran	5,49,333	6,61,299	1,11,966	20.4	13.9	98.5
Amritsar	6,25,572	6,93,010	67,438	10.8	15.3	88.3
Ajvala	3,54,907	3,97,580	42,673	12.0	15.4	83.8
Total, district	15,29,812	17,51,889	2,22,077	14.5	14.7	91.7

The new demand consumes 5.3 per cent of the gross assets of the district as determined in the produce estimate (at last settlement 8.8 per cent was taken), and its incidence on the area is :

Tahsil	Rate per cultivated acre		
	Rs.	a.	p.
Tarn Taran	2	2	5
Amritsar	2	10	3
Ajvala	2	6	6
District	2	6	3

42. These results are, broadly, in line with the forecast of what the district might be expected to yield. In the light of the absolute limit of one-fourth of net assets imposed by section 48B of the Punjab Land Revenue Act an assessment absorbing only 14·7 per cent may seem unduly generous. This is where the independent limit set by section 51 of the Act comes in to prevent the average rate of incidence on the cultivated area of the new demand exceeding the old rate of incidence by more than one-fourth (except in special circumstances which do not affect rural Amritsar). Government have voluntarily forgone 9·3 per cent of the maximum levy permissible under this provision. It is only this voluntary sacrifice of revenue which requires comment. In Tarn Taran tahsil we have gone near enough to permissible to make no odds. In Amritsar, which is of much the same strength, the major consideration in picking the demand so much further below the permissible was the expediency of reducing the disparity in the incidence of assessment between the two tahsils. It will be seen that although the percentage of increase over the old demand is in Amritsar little more than half of what it is in Tarn Taran, Amritsar will still pay out more of its net assets to meet the new demand. In Ajuala the forecast recognised that it would be impossible to take the maximum throughout the tahsil; and while we have gone within fifteen per cent of it in the two strong circles, the two weaklings pay less than eighty per cent of what might have been demanded of them. This lenience needs no justification in view of their circumstances.

43. It was in fact difficult to convince the landowners of the district that there was any generosity in the proposals at all. Conditions had so completely changed since the forecast report was written that its statistical rise of seventy and effective rise of thirty per cent in prices had given place to current agricultural prices poorer by some six per cent than those adopted for the last settlement twentyfive years before. My commutation prices stood at rather more than 170 per cent of current market prices and it was not easy for the people to accept the assumption made in the Land

Revenue Assessment Rules that the range of future prices, on which the settlement will be paid, would not be dissimilar from the average prices of the past which these commutation prices represented. To cover the disparity without impairing the law or surrendering potential revenue the sliding scale was adopted as a feature of the settlement and has come under very detailed examination of which discussions will be found in the assessment and final reports and in the orders of Government.

The procedure for determining remissions under the sliding scale has been varied from time to time and may change again before this settlement is imposed. The Collector will of course follow the rules which happen to be in force at that time but will be bound to use in his calculations for each area with a separate index, the crops, their relative importance, the standard index and the price periods approved at settlement. The standard indices are 32,000 for Tarn Taran tahsil; 35,500 for Amritsar tahsil; 31,300 for the Sailab and Hithar circles of Ajnala tahsil and 35,000 for the Uthar and Nahri circles of the same tahsil.

44. For facility of reference I have abstracted the acreage rates sanctioned for the various classes of cultivated land in each assessment circle which are exhibited in the following statement.

Tahsil	Circle	Chahi	Nahri	Sailab	Param and ebr.
		Rs. a.	Rs. a.	Rs. a.	Rs. a.
Tarn Taran	Upper Manjha	2—8	2—14	1—4	1—6
	Central Manjha	2—2	2—4		0—14
	Bet Bangar	1—12	2—4	1—4	0—12
Amritsar	Bet Bangar	2—14	2—12	1—4	1—2
	Jandiana	3—2	1—4		1—0
	Nahri	3—6	3—12		1—8
	Mirankot	2—12	3—0		1—4
Ajnala	Sailab	2—4	3—0	1—6	1—2
	Hithar	2—8		1—4	1—2
	Uthar	2—14	3—4	1—4	1—2
	Nahri	3—2	3—8		1—6

45. Land irrigated from the Upper Bari Doab Canal pays two charges alien to unirrigated land—a water advantage rate (*nahri parta*) and an occupier's rate (*abiana*). The latter is a straight-forward commercial arrangement whereby the cultivator pays for the water he uses. The former is a recognition by assessment of revenue of the State's right to share in the increased profits from land which its canal has produced. In practice it is the difference between the soil rates on *nahri* and *barani* land shown in the preceding paragraph and is imposed as part of the demand of an estate and not as a separate charge although *ordinarily in distribution within the estate* it is charged on *nahri* land only. The following statement exhibits the rate of *nahri parta* sanctioned for each circle and the total assessment on this account. In no circle does this amount coincide with the sum which would have been produced by applying the rate to the *nahri* area. The reason for this is that in the distribution of the demand over estates I have followed precedent and gone above or below the circle rate according to the quality of individual villages and their irrigation.

Tahsil	Circle	Rate of <i>nahri parta</i> in annas per acre.		Total amount of <i>nahri parta</i> imposed.
		old	new	
Tarn Taran	Upper Manjha	14	24	81,550
	Central Manjha	8	22	1,31,215
	Bet Bangar	11	24	16,590
	Total, Tarn Taran tahsil			2,29,355
Amritsar	Fet Bangar	8	26	49,095
	Jandiala	16	36	11,520
	Nahri	18	36	77,595
	Mirankot	16	28	7,035
	Total, Amritsar tahsil.			1,45,245
Ajnala	Sailab	12	30	2,135
	Uthar	19	34	38,090
	Nahri	17	34	48,005
	Total, Ajnala tahsil			88,230
Total, district				4,62,830

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The Irrigation Branch is entitled to a book credit of the amount of *nahri parta* and an annual credit of Rs. 4,62,830 on this account has been sanctioned. It will of course operate from the enforcement of the new assessment and is subject to sliding scale remissions. This credit exceeds the amount sanctioned at last settlement by Rs. 2,66,989/- and the *nahri parta* of the urban areas is still to come. The magnitude of the increase is due to my lenient treatment of unirrigated lands throughout the district. A book debit of Rs. 2,13,675/- payable in five equal annual instalments from *Kharif* 1945, has been raised against the Irrigation Branch on account of the cost of settlement operations.

The irrigated assessment has always carried with it a parallel provision for its extension to land brought under command between two settlements and its remission on land which ceases to enjoy the advantage during the same period. The current rules have been simplified and those approved for this settlement are reproduced in the Settlement Report. The rate fixed for each estate has been recorded in my order determining its assessment which forms part of the record of rights and is also bound in the abstract note-books and on the vernacular *bachh* file. The most important change is the omission of direct provision for the exemption of land paying a *chahi* assessment. The safeguards against such double assessment are the proper observance of the instructions contained in the Land Records Manual and understanding of the definitions approved for this settlement. Given these it is unlikely that land will have to bear a double assessment unless the irrigator deliberately changes over to canal irrigation although he has a perfectly good well, a practice to be discouraged by a heavy revenue when canal water is so scarce. Where canal water is used merely to supplement the wells the definitions will protect the irrigator from a *nahri* assessment and where he turns to the canal because his well has gone out of use his *chahi* assessment will be remitted under the Land Revenue Assessment Rules. The only other feature that requires notice is the case of estates which have distributed their land revenue over all cultivation at a flat rate

irrespective of its class. In such cases since *nahri parta* is not paid by any holding in proportion to its *nahri* land any change in *nahri parta* should *ipso facto* be distributed in the same way over every holding.

The rates of *abiana* are not directly in issue in a settlement as they are not a part of the revenue. It is, however, appropriate to mention here certain decisions taken during these operations about non-perennial (*kharif*) channels. I was asked to advise whether it was desirable to discontinue the practice of allowing water in these distributaries for short periods in the *rabi* season. This concession worked very unequally, for some channels received a December watering, some a March watering and some got water in both these months. All of them, however, and irrigators whose channels received no winter water at all, were charged *abiana* at the same rate. When the concession was instituted there was not the same demand for water as there now is when considerable dissatisfaction with perennial supplies is expressed. It is admitted that the supply in the river is often short of the canal's requirements from October to March and, this being so, there is a moral obligation to reserve such supplies as there are for irrigators on perennial channels to whom there is an implied promise of water. Nobody can complain if this supply fails owing to a low river but there is every ground for clamour if short supplies can be attributed to their diversion to *kharif* channels which have no claim of any kind on them. It was decided that with effect from the *rabi* harvest of 1940-41 *kharif* channels in the Amritsar district should be closed from the end of October and not reopened till April, the opening in April to be as early as possible and the closure in October in case of rotational working to be, as a matter of working practice, as late as possible. It has also been decided that with effect from the *rabi* harvest of 1940-41 all *rabi* crops on *kharif* channels will pay the same rate of *abiana*. This is a concession which will be much appreciated and should make a considerable difference to the irrigators' budget. On wheat, for example, the farmer will pay a third less than he now does and less than half of the rate on perennial channels.

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46. The well cylinder occupies a separate field number in the record-of-rights and ordinarily the *chahi* assessment is put on it and not on the *chahi* land and is paid by the owners of the well according to their shares in it. Any sum assessed as *qimat ab* in this way is not collected for a period designed to allow the owner to recover twice his capital cost on the construction of the well, and if the well falls out of use the demand is entirely remitted. If the owners prefer to distribute the *chahi* element in the demand over the land and not allocate it to wells, there is of course no remission. The following statement shows the number of wells and the total sum remitted for varying periods on account of these exemption

Tahsil	Assessment circle	Number of wells exempted.	Amount of protective leases Rs. a.
Larn Taran	Upper Manjha	294	5,816
	Central Manjha	274	4,662-8
	Bet Bangar	55	692
	Total	623	11,170-8
Amritsar	Bet Bangar	34	6,277
	Jandiala	242	7,875
	Nahri	52	1,865
	Mirankot	9	251
	Total	647	16,265
Ajnala	Sailab	137	1,055
	Hithar	123	1,350
	Uthar	51	867
	Nahri	19	381
	Total	330	3,653
Total, district		1,600	31,091-8

47. The term of settlements is now fixed by statute at forty years and formal orders to this effect have been conveyed in Government's orders on each assessment report. These originally directed that the period should begin from *rabi* 1940 in the Tarn Taran tahsil and from *kharif* 1940 in the rest of the district, recoveries for first five years being however made in accordance with the assessment and *bachh* of the expiring settlement. These orders have been amended to make the settlement run for forty years from the actual introduction of new assessment, that is from *rabi* 1945 in Tarn Taran tahsil and from *kharif* 1945 elsewhere. The postponement is Government's fulfilment of its pledge that for the first five years after reassessment nobody should pay more. This guarantee was at first interpreted by Government itself as allowing the distribution of the new demand over holdings, its collection less remissions due under the sliding scale in the first harvest of each year and its reduction by rebate on the second instalment to keep the annual demand of each estate down to its previous level. This would have had the great advantage of allowing the Settlement Officer to complete all his normal duties and to leave the settlement ready to creak into action the moment the word was given. Government later decided that effect should be given to its pledge by postponing the introduction of the new settlement with all its features till the promised period of five years had elapsed. During this period recoveries will be made strictly in accordance with the *bachh* of the expiring settlement, even where the new demand is a reduction on the old.

48. Until the third regular settlement every estate paid half of its revenue after the *kharif* and half after the *rabi* harvest. In that settlement Mr. Grant tried to persuade villages not enjoying canal irrigation (where *kharif* crops only occupied half the area of the *rabi* crops) to pay in unequal instalments but only eighteen estates decided to pay a third in the *kharif* and two-thirds in the *rabi*. At last settlement there was little change in the Tarn Taran and Amritsar tahsils but a number of estates in the Ajnala riverain where the autumn crops are extremely precarious

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ous and the incidence of the demand on that harvest often very high, were converted to the payment of less than half of their demand in the *khairf* harvest. The landowners have again been consulted at this settlement during my announcement of demands and a few estates have opted for changes in their instalments. The tendency has been to revert to payment of half the demand in each harvest with the extension of security from irrigation, but a few riverain villages have gone so far as to pay the whole of the demand in the *rabi*. In such cases the change was discussed in their presence with the *zaildar* before I consented to it. The following statement shows what changes have taken place. Two Government *rakhs* carry no assessment.

Taluk	Assessment circle	Number of villages paying									
		1/2 kharif 1/2 rabi		2/5 kharif 3/5 rabi		1/3 kharif 2/3 rabi		All in rabi		Total.	
		last settle- ment	now	last settle- ment	now	last settle- ment	now	last settle- ment	now	last settle- ment	now
Tarn Taran	Upper Manjha	158	158							158	158
	Central Manjha	167	167							167	167
	Bet Bangar	28	28							28	28
Amritsar	Bet Bangar	86	86							86	86
	Jandiala	123	122			1	2			124	124
	Nahri	127	128			1				128	128
	Mirankot	18	25	2	1	7	1			27	27
Ajnala	Saifab	22	26			49	42	7	10	78	78
	Hithar	63	67			16	12			79	79
	Uthar	116	117			1				117	117
	Nahri	69	71			4	2			73	73
Total, district		977	995	2	1	79	59	7	10	1,065	1,065

These arrangements take effect from the introduction of the new assessment. At last settlement the practice of paying each instalment in two portions was maintained for the *kharif* instalment but abandoned for the *rabi* payment. No change has been made in these arrangements but the dates have been altered, and under the echelon system the roster now runs from 1st January to 28th February for the *kharif* instalment and from 15th to 31st July for the *rabi*.

49. Cesses have not changed since last settlement. They amount to $17\frac{1}{2}$ per cent—local rate at $12\frac{1}{2}$ per cent paid to the district board and village officers' cess at 5 per cent paid to lambardars for collection of revenue.

50. New rules for the measurement and assessment of areas subject to river action have been approved. The new rules are simpler than the old. The discretion currently given to assess a crop out of its class, to treat uncultivated land in certain circumstances as unfit for cultivation owing to river action, and to reduce an assessment on land which has deteriorated, has been withdrawn. The power was rarely exercised even in recent hands and the assesses have suffered by the failure to make some presumptions allowed by the rules. The new rules make a presumption about the destruction of uncultivated land mandatory and there is an important change of principle in the abandonment of soil rates based on the crop sown in favour of soil rates determined on the quality of each estate irrespective of the crop. Estates on the Beas have come on to the same footing as those on the Ravi in the provision for annual measurement. The estate of Chahia which lies in the Jastarwal pond (*chham*) in Ajnala tahsil, has been made subject to the same rules. Including it, 102 estates have been classed as fluctuating.

51. A new feature in the future revenue administration of the district is the introduction in this settlement of rules for the reduction of assessment on account of deterioration. The serious loss of cultivated area in the last fifty years from causes discussed

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in the Settlement Report demands relief for the landowner whose net assets are destroyed through no fault of his own. The rules are designed to deal with genuine hardship while avoiding a multitude of paltry petitions. Provision is made for consulting expert opinion and the reclamation of remediable cases is encouraged. In the decision of cases for remission reference will be necessary to the classification of the land at settlement to avoid relief to land which was assessed on other grounds than its culturable capacity (*e.g.* as urban land or as waste with an income from grass) or the denial of relief to land whose change has been gradual since settlement and which might appear as uncultivated but not unculturable in later annual records.

52. A very detailed note on secure and insecure estates with a scheme for the working of suspensions appears in the Settlement Report. I classed 83 insecure estates as insecure. My proposals were accepted.

53. A fair number of unauthorised assignments was detected, 769 cases came under review. Where an institution was not being properly maintained and remedial action was possible the assignee was given time to take it before the axe fell. Aberrations for which the beneficiary was not responsible included excessive payments due to misinterpretation of Government orders, and payments to non-entitled persons. The present value assignments is just over two lakhs of rupees. There may be a devaluation in grants not entitled to owners' rate wherever *nah. i parta* has become a bigger element in the revenue as a result of re-assessment; but the amount can be determined only when the distribution of the revenue is done.

54. The following statement shows the number of estates in which each method of measurement has been followed.

SECTION D.

MISCELLANEOUS REVENUE.

1. The principal sources of miscellaneous revenue are
 introductory. excise, stamps, electricity, registration and motor
 taxation which are provincial, and income-tax
 which is a central subject.

2. The gross annual revenue from excise is in the neigh-
 Excise. bourhood of twentyfour lakhs of rupees of which
 duty on liquor accounts for some eighteen lakhs,
 vend of liquor two lakhs, duty on opium two and a half lakhs,
 vend of opium one lakh and vend of hemp-drugs half a lakh.
 Expenditure is about a lakh of rupees, three-quarters of which
 is the cost to Government of excise opium and the balance
 establishment and rewards. About two hundred excise offences
 are detected each year.

The population of the district includes a large number of
 sikh jats who are addicted to liquor. The considerable con-
 sumption of licit liquor is supplemented by the production on a
 commercial scale of cheap illicit liquor which finds ready
 customers. Detection is difficult owing to popular sympathy
 with the distiller. The excise staff consists of an inspector and
 six sub-inspectors. There is a licensed distillery at Amritsar
 which supplies spirits throughout the Punjab, the Indian states
 and to troops. Still-head duty from country spirit issued from
 this distillery in 1938-39 was Rs. 166573/-. Revenue interests
 are protected by a staff of one inspector and four sub-inspectors.
 For the sale of country liquor there are three wholesale and
 thirtynine retail licenses. The municipality of Tarn Taran
 has exercised the authority given it under section 5 of the
 Punjab Local Option Act 1921 to direct that liquor may not be
 sold in its area, but large quantities of liquor are smuggled into
 the town.

The cultivation of the poppy is prohibited in the district
 and only excise opium can be sold at the thirtysix licensed
 shops.

The *chara* godown at Amritsar was abolished in 1933 and

the drug is now imported from the Hoshiarpur district. *Bhang* grows wild in the district and the wholesale licensee is permitted to gather it for sale. There are four retail licensees for hemp-drugs. The Standard Drug Company Limited manufactures medicinal preparations containing rectified spirit which are supplied to chemists on payment of duty and to hospitals free of duty.

3. The net receipts from stamps (exclusive of motor
Stamps taxation paid in stamps) are about seven lakhs
of rupees annually— three lakhs under the Stamp
Act and four lakhs under the Court Fee Act.

4. The development of the Mandi hydro-electric scheme
Electricity. has opened up a fresh source of revenue. The
Amritsar Division of the Electricity Branch of the
Public Works Department has an annual revenue exceeding
nine lakhs of rupees while its expenditure is about two and a
half lakhs of rupees. These figures, however, do not relate to
the district alone as the jurisdiction of the division extends to
parts of Gurdaspur, Jullundur and Lahore districts as well.

5. The net annual income from registration is three-
Registration. quarters of a lakh of rupees.

6. The net income to Government from motor taxation
Motor taxation after remissions for local taxation has been about
half a lakh of rupees annually. This may be
expected to show a considerable increase under the new Act.
Fees for licenses bring in a quarter of a lakh of rupees.

7. Amritsar as the most important centre of trade in
Income tax. northern India has a natural interest for the
Income-tax Department. In 1939-40 (a bad year)
the net demand on account of income-tax, super-tax and cor-
poration tax was Rs. 7,84,645/-. The following classification
of the revenue from major classes of income may be of interest—
Rs. 1,30,464/- from piece goods, Rs. 118,232/- from house
property, Rs. 73,570/- from retail trade other than piece goods,
Rs. 51,288/- from money lending, Rs. 44,503/- from mills and
Rs. 32,355/- from general merchandise. Net collections were

Rs. 718,724/-. The total number of assesses handled was 3546, tax being collected from 1828 in the following major classes by status : hindu undivided families (870), unregistered firms (122), salaries (110), companies (18), associations (24) and individuals (634). Of 512 decided appeals 208 were successful in whole or part.

LOCAL AND MUNICIPAL GOVERNMENT.

SECTION E.

1 The Local Boards which existed twentyfive years ago have all disappeared and local government in the District Board. rural area is now in the hands of a District Board of forty members of whom thirty are elected, six nominated and four (Deputy Commissioner, Civil Surgeon, District Medical Officer of Health and District Inspector of Schools *ex officio*). The Deputy Commissioner is *ex officio* chairman. There is an elected vice-chairman to whom considerable powers have been delegated. The principal employees of the board are the secretary and the district engineer. Most of the detailed work of the board is done in committee. Five committees have been constituted—Finance, District Works, Education, Medical and Public Health, and Agriculture and Vehicles whose decisions are considered in the ordinary meetings of the whole board.

The board's annual income exceeds seven lakhs of rupees and its expenditure is in the same neighbourhood. Nearly four lakhs of rupees come from Government grants. The balance is the board's own income in which the biggest single item is local rate which is approximately two lakhs of rupees. Each department of the board's activities receives a fixed percentage of the board's income together with its departmental grants from Government. Educational grants being much higher than other the result is that the expenditure on this department is nearly four lakhs of rupees. Other responsibilities are, however, not neglected for the expenditure on district

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works such as roads, bridges and buildings exceeds a lakh of rupees. The board maintained over fifty miles of metalled roads but recent provincialisation has reduced this to little more than twenty miles. There are some 340 miles of unmetalled roads in the board's charge. Conversion of important unmetalled roads to metalled roads is undertaken in regular programmes. The board manages twelve rural dispensaries and maintains seven civil dispensaries and twentyone veterinary dispensaries.

2. There are three municipalities in the district among which Amritsar is of course outstanding. It was created in 1868 and has always been of the first class. The constitution of the committee has been revised from time to time but at present there are 31 members of whom 23 are elected and 8 nominated by Government. The Deputy Commissioner ceased to be president of the committee and an ex-officio member in 1921. The committee elects its own president and two vice presidents. The members hold office for three years. The principal officers employed are the Executive Officer, Secretary, Medical Officer of Health, Municipal Engineer, Chief Electrical Engineer and Town Planner.

Terminal tax constitutes the principal source of municipal revenue. During the last five years the annual collections have ranged between Rs. 8,10,000 and Rs. 9,77,000. Piece goods and other articles of cloth and clothing are the biggest item accounting for a third of the receipts, with food, drink and fodder a good second. The imposition of terminal tax in the Amritsar Municipality was sanctioned by the Punjab Government from the 1st December, 1929 when octroi ceased to be levied. The committee is contemplating the substitution of octroi (without refunds) for terminal tax as according to the Government of India Act (1935, the latter has now come on the federal list of taxation).

Other important heads of municipal income are wheel tax (recently abolished), license fees on vehicles, sale of water, sale of sewage, rents of nazul and municipal lands, and fairs.

The following table compares income under the various heads during the last 5 years. —

Head of account.	Particulars.	1935-36	1936-37	1937-38	1938-39	1939-40
I. A.	General	38943	62854	110080	550712	153498
IB(ii)	Tax on the sale of immovable property.	125	78	338	325	181
IB(iv)	Terminal Tax	90092	871517	810956	877481	976927
IB(x)	License fee on dangerous and offensive trades	5054	5999	5959	7068	7210
ID(xii)	Tax on vehicles	78580	76575	72810	75792	72331
IB(xiii)	Fees for vehicles licensing.	13223	12619	12367	11721	10301
IB(xvii)	Copying Fee (Miscellaneous)	650	931	899	737	787
IC(i)	Rented land and Buildings	21354	22669	33183	32658	29300
IC(ii)	Gardens and Road side trees.	5595	6024	8747	9553	15776
IC(iv)	Tehbazari.	7818	4475	5972	9539	11965
ID(iv)	Cattle pounds	2046	1951	1576	1757	2073
ID(ii)	Electricity Department	922635	1488491	1183630	983143	1016690
II.	Education.	84258	43332	103853	92948	86267
III.	Medical.	62	1973	951	...	...
IV.	Public Health.	67222	78158	80165	81488	74937
V.	Water Supply.	120592	123768	117788	159305	154728
VI.	Veterinary Department.	55883	57051	54761	52723	53037
IX.	Suspense Account.	54559	54592	49823	42907	36786
	Total (Rupees)	2428661	2916463	2651358	2989877	2703800

The financial position of the committee is quite satisfactory but the financial outlook is not very promising. The existing resources of the committee lack elasticity and cannot be depended upon to produce sufficient revenue from which such important and urgent schemes of public benefit as augmentation of water supply and underground drainage could be financed. What has made the financial outlook very uncertain is the problem of revision of electricity rates. The committee regards its electric supply concern (started in 1915) as a municipal trade

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[SECTION E

undertaking and since 1931-32 it has every year transferred large sums of money from the profits of this concern to general revenue to be utilised on various beneficent projects, such as the construction of the Princess of Wales Zenana Hospital (the hospital building has cost nearly Rs. 2,40,000), increase of water supply by the installation of additional tubewells, and extension of street lighting by electricity. In 1928 the Punjab Government decided to refer to the Electricity Advisory Board constituted under section 35 of the Indian Electricity Act the question of the revision of the maximal rates prescribed in the Amritsar Municipal Electric License for private and public supply. The Advisory Board has suggested drastic reductions in the maximal rates. The committee's view is that since it had of its own accord reduced the rates from time to time any further reduction in rates would virtually cripple its electric supply concern and seriously retard its future growth. No decision has been reached by Government in the matter.

The following table compares the expenditure under the various heads during the last 5 years.

Head of account	Particulars	1935-36	1936-37	1937-38	1938-39	1939-40
1. GENERAL DEPARTMENTS.						
1 A.	General	163176	162318	179590	171858	153843
1 B.	Tax and Licensing Department	68405	78927	71233	71012	73462
1 C.	Rented lands and buildings.	68319	67058	85200	109367	103541
1 D.	Public Safety and Convenience including Electricity Department.	79577	1309158	1053258	997418	975945
2	Education.	179756	239756	257659	311221	315000
3	Hospitals and Dispensaries.	73850	75394	249045	113411	91759
4.	Public Health.	433885	450740	431967	436418	465954
5.	Water Supply.	177642	132298	146414	45749	202542
6	Veterinary Department	9824	16584	12464	10071	10990
7	Municipal Works	165209	175961	155044	173667	514359
9.	Suspense Account	50714	48237	50737	42789	48883
	Total (Rupees)	2281855	2850071	2727120	2486458	2997663

The total expenditure provided for the year 1940-41 is Rs. 3502349/- which includes a sum of Rs. 1380112/- representing the expenditure of the Electricity Department. The expenditure on municipal establishment amounts to Rs. 1055173/- representing a third of the total expenditure of the municipality. More than half of the expenditure on establishment relates to the beneficent departments Education, Medical and Public Health. The expenditure on education has risen from Rs. 238244/- in 1931 to Rs. 318885/- in 1939-40. This additional expenditure of about Rs. 80000/- per annum has been met by the committee out of its own funds without resorting to any fresh taxation. The expenditure per scholar comes to Rs. 21/11 per annum while the Government grant amounts to Rs. 5/- per scholar. It is thus obvious that the slender resources of the committee are being strained to the utmost in order to provide for the educational needs of the citizens. The Amritsar Municipality spends more than Rs. 140000/- annually on medical relief while the Lahore Municipality which is the premier in the province spends Rs. 77000/- per annum under the same head. The committee's contributions to Government and private hospitals amount to the high figure of Rs. 44000/- per annum as compared with contributions amounting to Rs. 11000/- made by the Lahore Municipality.

For financing two major projects (the metaling and surface-painting of roads and the drainage and paving of *kuchas*) the committee has recently raised loans of Rs. 500000/- (half of which has been received) and Rs. 224210/- respectively from Government. The approved amortization plan in the case of each loan raised by the Committee is being faithfully carried out and capital repayments and payment of interest charges are being made regularly.

The following are the details of the loan liabilities upto the end of March, 1940.

	Amount outstanding
1. Loan of Rs. 20,00,000/- for Storm Water Drainage scheme sanctioned by Government vide memo no 5471-L. G., dated 18th February, 1922.	Rs. A. P. 31968 11 5

AMRITSAR DISTRICT]

[SECTION E

*Amount
outstanding*

2. Loan of Rs. 5,75,000 for extension of Electricity sanctioned by Punjab Government vide letter no. 401 L. S. G. dated 31st January, 1929.	356313 5 1
3. Loan of Rs. 2,50,000/- for the improvements of roads sanctioned vide letter no. 932-L. G. 38-12036 dated 28th March, 1939.	241604 9 1
4. Loan of Rs. 2,24,210/- for paving of <i>kuchas</i> , sanctioned vide letter no. 932.L.G. 29/1036 dated 28th March, 1939.	216680 10 3
Total.	<hr/> 846567 3 10 <hr/>

The original Amritsar Waterworks scheme was built in 1904. The source of supply consisted of 40 percolation wells on the north-east side of the city near the junction of the Pathankot Branch Railway line with the North Western Railway main line. In the course of time further additions to the Water-works scheme were carried out particularly during the year 1920. A number of independent tubewells have been installed in the municipal area mostly inside the city and most of them supplement the supply of water from the Head Waterworks by pumping either into the City Waterworks or into the distribution system direct. There are in all 21 independent tubewells in different parts of the city. The water supply of the town has also been augmented by means of tubewells at the Head Waterworks where five new tubewells have been installed. The number will shortly be increased to eight in order to ensure a daily supply of 24,00,000 gallons. The old pumping plant at the Head Waterworks run by steam is now reserved for emergencies and the electrically driven plant with which the new tubewells have been linked has been put into commission. It is also proposed to provide nine additional independent tubewells at convenient points in the municipal area in order to ensure that the daily water supply which averages about 14 gallons per head is increased to not less than 25 gallons per head and *pari passu* the supply is increased to cope with the

anticipated advance of population over 300000. A vast majority of the existing tubewells pump directly into the distribution system. This is by common consent an unsatisfactory and uneconomic system and in order to remedy this state of affairs the Committee has provided a sum of Rs. 180000/- for the construction of 3 overhead reinforced concrete service reservoirs of 100000 gallons capacity each to maintain a good distribution pressure. The execution of this project has been entrusted to the P.W.D. A start has also been made with the overhauling of the distribution system which needs thorough re-organisation. A sum of Rs. 60000/- has been placed at the disposal of the Superintending Engineer, Public Health Circle, Punjab, for extending the mains and his assistance has also been enlisted in the preparation of a comprehensive scheme for redesigning the entire distribution system.

Amritsar is situated in a basin, a factor to which the city owes most of its difficulties regarding its drainage problems. In 1921 the municipal committee prepared a project for the construction of the Storm Water Channel for the improvement of the drainage of the city. The estimate framed for the work amounted to Rs. 291410/- and the cost of the work was borne by the Government and the committee in equal shares. No other drainage scheme of any magnitude has been undertaken by the Committee since.

The committee has been faced from its very inception with the gigantic task of filling up a large number of offensive swamps both inside as well as on the outskirts of the city. The work of filling up *dhabbs* (ditches) was commenced in 1859, and has been carried on without interruption upto the present day. Some idea of the magnitude of the task which the committee has accomplished can be conveyed by the fact that the city ditch alone which the committee filled up was 5 miles in length, 120 yards in width and 5 yards in depth. Practically all the *dhabbs* have been filled up and the reclaimed land converted into gardens.

The city sewage is disposed of by means of the extramural drain. The liquid sewage is discharged into a settling tank at the Sewage Disposal works and

from where it is lifted up by electrically driven pumps and carried through masonry channels for distribution to zamindars for raising crops. An area of 710 acres is irrigated by the Ganda Nala. An annual revenue of about Rs. 5000/- is derived by the committee from the Ganda Nala.

The arrangements provided by the Committee for the electric lighting of the city leave little to be desired. There are more than 6300 electric street-lights and even the remotest parts of the municipal area are served by street-lighting extensions.

The management of the Baisakhi and Dewali Fairs and Cattle Fairs was permanently transferred to the Municipal committee in 1892. Notwithstanding the phenomenal increase that has taken place in recent times in the number of commercial fairs held in this Province the Amritsar fairs continue to enjoy an unrivalled position. For a commercial city such as Amritsar it is impossible to overestimate the importance of these fairs. The large influx of traders and visitors into the city which takes place on the occasion of these fairs is welcomed by the trading classes in general as it holds out to them a promise of brighter business. The committee therefore spares neither pains nor expense in striving for the achievement of the largest possible measures of efficiency in the management of its fairs. Each lasts for twelve days and in order to make it as attractive and instructive as possible shows are arranged by the Veterinary Department, Tube-Well Boring Department, Agricultural Department, Industries Department, Temperance Society Amritsar, and the Municipal Health Department. On the concluding day an elaborate sports programme is provided. The great interest evinced by the committee in all matters pertaining to animal husbandry and live stock has been in no small measure responsible for the improvement of the local breeds. In order to stimulate interest in cattle-breeding prizes of the value of Rs. 2600/- are given by the Committee for cattle and about Rs. 600/- for horses and mules. No contribution is now made by Government. The average annual expenditure of the Committee over the last ten years under the head Veterinary Department and related subjects such as

cattle and horse-breeding and veterinary relief has been about Rs. 30000/-.

3. Tarn Taran has had a chequered municipal history.

Tarn Taran
Municipal
Committee.

It was made a municipality as long ago as 1886 but was reduced to the status of a notified area in 1915 and to a small town in 1924. It became a municipality again ten years later with nine members, seven of whom are elected and two nominated. It has an annual income in the neighbourhood of half a lakh of rupees. The incidence of taxation is Rs. 1/7/5 per head of population.

4. The municipal fortunes of Jandiala have also varied. A

Jandiala
Municipal
Committee.

municipality in 1912, it was reduced to a notified area in 1916 but became a municipality again in 1927. Its committee consists of twelve members of whom nine are elected and three nominated (including an *ex-officio* president). Its annual income is in the neighbourhood of forty thousand rupees. Incidence of taxation is Rs. 2/1/6 per head of population

5. There are three small towns in the district at Majitha, Ramdas and Sultanwind. All of these were created

Town committees.

in 1924 but Majitha and Ramdas had a previous municipal history. Majitha has eight members of whom six are elected and two nominated; Ramdas six members of whom five are elected and one nominated; and Sultanwind eight members of whom six are elected, one nominated and one *ex-officio* president. Majitha is really a town but Ramdas is still essentially a village. The urban portion of Sultanwind revenue estate is included in Amritsar municipal limits and the small town has a rural character. The incidence of taxation per head of population is Rs. -/7/6 at Majitha, Rs. -/3/10 at Ramdas, and Rs. -/8/11 at Sultanwind.

6. The only notified area in the district is Chheharta

Notified area.

constituted in 1938 from those parts of the revenue estates of Wadali Guru and Kala Ghanupur which had become urbanised by industrial expansion. Most of the new factories in the Amritsar area have congregated at Chheharta.

SECTION F—PUBLIC WORKS

1. Public works outside the control of the District Board come under one of the three branches of the provincial Public Works Department - Buildings and Roads, Irrigation and Electricity.

2. Amritsar is under the control of the Third Circle of Superintendence at Lahore where the divisional headquarters (Second Lahore Division) are also situated. A sub-division is maintained at Amritsar in charge of an Assistant Engineer responsible for the construction and maintenance of most of the provincial roads and buildings in Amritsar and Gurdaspur districts. His charge includes the Grand Trunk road, the Amritsar-Pathankot road, and the Amritsar-Sialkot road as far as the Ravi. Expenditure in the sub division during 1938-39 was rather more than three lakhs of rupees.

Water supply and sanitary works are in the charge of the First Lahore Sub-division of the First Lahore Division of the Public Health Circle.

3. The headquarters of the Upper Bari Doab Canal Circle are located at Amritsar where the Superintending Engineer and three of his Divisional Engineers (the Executive Engineers of Majitha, Rawind and Jandiala) have their offices. A reference to irrigation will be found in chapter II.

The Central Workshops of the Public Works Department are also at Amritsar under the charge of a Superintendent of the standing of an Executive Engineer. The workshops have expanded considerably in recent years.

4. The Amritsar Division of the Electricity Branch was formed in November 1929. There are six Sub-divisions under its control: Dhariwal, Batala and Qadian in the Gurdaspur district and Tarn Taran, Amritsar Suburban and Verka in the Amritsar district. The electrical

system of this division consists of two extra high tension Receiving Substations, one at Dhariwal and one at Verka; the Trunk Transmission Lines; and local distribution lines and substations.

11 K. V. Supply lines to Amritsar city, Amritsar Suburban area, Chheharta, Verka, Majitha, Khalsa and Tarn Taran are fed from the Verka Receiving station. The supply to Jullundur and Ludhiana from Verka Receiving Station is given through a 132 KV Branch Transmission Line.

A supply of electrical energy for general and industrial purposes is given in Tarn Taran, Chheharta factory area, Khalsa, Verka and Majitha. Bulk supply is given to the Amritsar Municipality for distribution within the municipal licensed area. Bulk supply is also given to the Khalsa College and the Sacred Heart School at Amritsar, and to the Durbar Sahib at Tarn Taran. Supply for agricultural purposes has also been given to many consumers for pumping water. Distribution of electrical energy for lighting, industry, and agriculture in rural areas has been undertaken at village Kalgaupur near Khalsa College Amritsar and village Verka.

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SECTION G—ARMY

1. The detachment of troops at Amritsar forms a portion of Lahore Brigade. The present strength of the Amritsar detachment. garrison is one company of infantry in the cantonment, which is situated west of the Civil Lines Police Station, behind the District Courts. There is a Light Motor Patrol Section, A. F. (1) in Amritsar, belonging to the unit whose headquarters is in Lahore.

2. The great popularity of military service among the Jat Sikhs particularly in the Tarn Taran and Amritsar recruiting tahsis has retained for the district its position of one of the chief recruiting grounds for the Indian Army. Practically every regiment in which there is a Sikh Company

contains men enlisted from this district. Before war broke out in 1939 there were probably not less than 2,500 men in military employment. The post office pays 5647 pensioners some 17 lakhs of rupees a year.

SECTION H — POLICE AND JAILS

1. The police force of this district is in the administrative charge of the Deputy Inspector General of the Police Central range whose headquarters are at Lahore. Local executive charge is exercised by a Superintendent of Police, assisted by three Deputy Superintendents of Police. At times an Assistant Superintendent of Police is also posted to the district. The strength of the force is:

European Inspectors.	...	3
Indian Inspectors.	...	4
Sergeants.	—	2
Sub-Inspectors.	...	37
Assistant Sub-Inspectors.	...	37
Head Constables.	...	123
Head Constables (Mounted)	...	2
Foot Constables.	...	992
Constables (Mounted)	...	20

Of these one Inspector, 5 Sub-Inspectors, 8 Assistant sub-Inspectors, 40 Head Constables and 323 Foot Constables are employed in the city and one Inspector, one Sub-Inspector, 4 Assistant Sub-Inspectors, 4 Head Constables and 89 Foot Constables in the Civil Lines Police Station. There are four trackers serving in the district.

The communal composition of the force expressed in percentages is.

Muslim	64.9
Sikh.	19.3
Hindu.	15.4
Christian.	.2
Scheduled classes.	.09

The police stations and outposts are distributed as under :-

Amritsar tahsil. P. S. City Kotwali, P. S. A Division, P. S. B Division, P. S. C Division, P. S. D Division, P. S. Civil Lines (all in Amritsar city); and 5 rural police stations-Sadr, Jandiala, Kathunangal, Beas and part of Majitha.

Tarn Taran tahsil. Five police stations at Tarn Taran, Gharinda, Sirhali, Vairawal and Chabal; and one outpost at Kahangarh near Atari.

Ajnala tahsil. Three police stations at Ajnala, Ramdas and Lopoke, and the other part of Majitha.

There are three cattle pounds in the city limits at Divisions B. C and D, and one each at Police Stations Jandiala, Kathunangal, Beas, Gharinda, Sirhali, Vairawal, Ajnala, Ramdas and Lopoke.

2. The inhabitants of the district are hot-tempered and turbulent. The crime of murder is frequent and increasing. Riots are rare. As a rule murders committed by Jat Sikhs are not intelligently premeditated, though they are sometimes committed in circumstances of peculiar atrocity. The weapons employed are mainly *barchhi* (spear) or *talwa* fitted with long handle. The former weapon is very formidable. The principal occasions for murder are old enmity and sudden fights over land and women. Of the serious crimes against property, burglary is the commonest and a large proportion of offences under this head remains undetected. Dacoities and highway robberies are rare. Cattle theft is not common, for the district is so thickly populated that the stolen property cannot be taken far without being observed, and there are no uncultivated wastes where the animals can be hidden till the hue and cry is over. In petty crime traffic offences are heavy. Communal tension in the city gives rise to riots and sometimes murders. There are a few political agitators of provincial importance in the district who foment trouble.

3. There is one Sansi settled tribe and nine wandering tribes besides thirteen gangs of different tribes notified under the Criminal Tribes Act in the

Criminal
tribes.

[AMRITSAR DISTRICT]

[SECTION H.]

Amritsar District. Their total population is 1,870 out of which the population of the prominent tribes is

Sansis (settled)	1,484
Mahtams (gang)	25
Barrars (wandering)	141
Baddons	113

None of these tribes or gangs is responsible for any serious crime in the district and they seem to have been giving, for some time past, a fairly good account of themselves.

4. The necessity for establishment of a Reformatory Settlement for the members of notified Criminal Tribes was felt as soon as the movements of the wandering criminal tribes were restricted in January, 1917. The disused jail at Amritsar was selected, as a measure of economy, for this purpose and the Reformatory Settlement was established there on 1-4-1917 after making extensive additions. A beginning was made with a gang of Bhedkuts consisting of fourteen families. The population of the settlement rose to about 2,000 people at a time and for a long time it continued to be the most important institution of the department and a sorting centre of Criminal Tribes. On 31.12.1939, the population was 369 consisting of 186 males, 60 females and 123 children. This decrease in the population was due mainly to the reformation of the members of Criminal Tribes and partly to the strict scrutiny of the proposals for commitment on account of decrease in the crime attributed to the Criminal Tribes in the province. All able-bodied male members of the Criminal Tribes Committee to the Reformatory Settlement are employed in a factory attached to the settlement on such trades as carpentry, weaving, shoe-making, tailoring and *ban*-twisting. The average monthly earning is Rs. 8/- per worker and Rs. 14/- per family, as payment is made on a graded rate of wages with due regard to the number of workers and dependents. The institution is under the control of a whole-time Extra Assistant Commissioner designated as Superintendent. He is assisted by two Assistant Superintendents, two Assistants, two clerks and fortyeight warders. The educa-

tion of the children of the inmates of the Reformatory Settlement is carried on in a school attached to the institution run by three trained teachers. A sub-assistant surgeon, a compounder, and a nurse are attached to a dispensary maintained in the institution to look after the health of the inmates. The Boy Scout and Girl Guide movements have found a very sound footing in the Settlement and children are trained in St. John Ambulance Courses to enable them to render first aid to the injured.

The members of notified Criminal Tribes are averse from education but education up to the primary standard both for boys and girls is compulsory for them throughout the province. In order to make satisfactory arrangements for the orphans and malingers a Reformatory School was established at Amritsar in 1928. This school was located in a building built by the Criminal Tribes Department in the compound of the Reformatory Settlement. Neglected boys between the ages of 9 and 14 are separated from their parents and guardians and are placed in the Reformatory School until they reach the age of 18. The boys are given vocational training in the institution and receive ordinary education up to the Lower Middle Standard. Tailoring, carpentry, weaving and shoe-making are some of the trades taught to them. Lock-making will shortly be introduced. As soon as the boys complete the elementary training in the factory, they are allowed wages varying between six pies to one anna per boy per day. The money earned by them is deposited in Savings Bank Accounts opened in their names for they do not have to spend anything on their clothing, feeding and education during their stay in the institution as entire expense is borne by Government. The Reformatory School Band and Scout Troop are well known for their smartness and efficiency. The population of the school is generally 100 boys. The staff of the school consists of Boarding House Superintendent, four teachers and three warders.

5. The present jail near the district court was completed during the year 1913. The accommodation is officially intended for 264 prisoners and under-

trials, but the average daily number of prisoners is about 450. The accommodation in the jail is insufficient and Government have recently had under consideration the question of constructing a Central Jail at Amritsar. Owing to the outbreak of war this has been held in abeyance. The administrative charge of the subsidiary jail is in the hands of the District Magistrate who acts through one of his Extra Assistant Commissioners. The establishment consists of one Assistant Superintendent, one Head Warden, nineteen Warders, one Matron, two clerks and one compounder. The police doctor visits the jail daily. The expenditure on maintenance and guarding during the year 1938-39 was

maintenance	...	Rs. 18,573/-
transfer of prisoners	...	Rs. 1,405/-
guarding	...	Rs. 10,415/-

No industries are carried on in the jail as undertrials on conviction are despatched in batches to the Lahore Central Jail except habitual offenders who go to the Montgomery Central Jail.

SECTION I.—EDUCATION AND LITERACY

1. In the quarter of a century which has passed since the last edition of this gazetteer there has been remarkable progress in the district. The statistical basis of the following account is the position reached at the end of March 1939. Collegiate education is provided by four institutions. The number of boys' schools has risen from 309 in 1914 to 639 now with an increase in enrolment from 21,904 to 55,368. Girls' schools have increase from 59 to 269 and their enrolment from 12,204 to 18,931. The district continues to occupy a place in literacy above the provincial average. 67 in every thousand people are literate compared with 44 in 1914. The provincial rate is 53 per thousand. In Amritsar city it is 151 per thousand. From table 50 of Part B of this volume it

will appear that the percentage of literacy is 10·3 among males and 2·2 among females. The Amritsar tahsil is well ahead of the rest of the district with a literacy percentage of 9·1—13·4 among males and 3·5 among females. In Tarn Taran tahsil the percentage is 4·3 and in Ajnala 8·2. In both these tahsils female literates are inconsiderable 1·1 per cent of their sex in Tarn Taran and 3 in Ajnala. Among the major communities the Hindus have a long lead and the Sikhs are slightly ahead of the Muslims. The increase in the Christian community from less than a thousand persons fifty years ago to nearly seventeen thousand at the last census has been accompanied by a degeneration in literacy from 58·8 to 5·4 per cent. The common scripts are Persian, Gurmukhi and English

2. Of the four colleges in the district three cater for men and one for women.

Collegiate
education.

3. The oldest institution is the Khalsa College which began as a middle school in 1893 and became a high school three years later. Intermediate classes were started in the same year and degree classes (B.A. only) in 1899. Other degree courses have since been added and there are now M.A. classes in English and honours schools in Chemistry and Botany. In 1930 a special department was created to stimulate and organise research in Sikh history. There are fortyeight professors and lecturers on the staff. The management of the institution is in the hands of a committee of twentysix sikhs who are responsible to a General Council of 100 members representing the British districts and the Sikh States. The college is maintained on the interest of contributions from the Phulkian States, Kapurthala and Faridkot; an endowment fund raised by public subscription; and an annual grant from Government. Its objects are to impart to Sikh youths an education that will tend to raise the status of the Sikh doctrine, to maintain the Sikh religion, to promote morality and sobriety of life, to develop active habits and physical strength and to produce intelligent and useful citizens and loyal subjects of the King-Emperor. It is primarily designed for the higher education of Sikhs but non-Sikhs are

Khalsa
College.

freely enrolled. Of some eight hundred student in the college at present nearly two hundred are non-Sikhs. The college is fortunate in its situation on the Grand Trunk road about two miles from Amritsar in country which is still fairly open. The main building is a fine specimen of Indo-Saracenic art well equipped with class rooms, laboratories, halls, and other necessary accommodation. Its seven hostels accommodate some five hundred sikh and twenty muslim students. In the extensive grounds there are botanical gardens, agricultural farm, model dairy and fruit nursery, as well as ample space for games and athletics. A gymnasium, a pavilion, a swimming tank, common rooms, library and reading room are other amenities. Non-resident students have an institution called the City Students' Association instead of a common room.

4. The Hindu Sabha High School founded in 1906 was raised to the standard of an Intermediate College in 1924 and to degree status in 1936. It is managed by a council elected by the Hindu Sabha which also gives it financial support from its extensive properties in the Jubilee Market. The municipal committee and certain mercantile associations also give support and there is an annual income exceeding half a lakh of rupees from fees. No Government grants are received. The college is situated near the city wall of Amritsar inside the Lohgarh Gate but has purchased a site outside the city for new buildings. There is a staff of twenty-one professors and lecturers with a physical director and a medical officer. Teaching up to B.A. and F. Sc. is given to the six hundred students on the rolls among whom all communities are represented. A hostel in Civil Lines can accommodate twentyfive student.

5. The M.A O. High School established in 1875 was raised to the status of an Intermediate College in 1933 and to degree standard two years later. The building is situated near the Hall Gate and the old city ramparts. The management is in the hands of the Anjumen-i-Islamia which also finances the college. No grant is received from Government. There is a staff of fifteen including the Principal, the usual professors and a director of

Muslim Anglo-
Oriental
College.

physical training. Teaching is given up to B.A. and F.Sc. There are about four hundred students. There is hostel accommodation for thirtyfour students.

6. The ladies' college is a Government institution located in hired buildings in Civil Lines and is maintained from provincial revenues. The college was founded in 1932 and was raised to degree standard in 1933. There is a staff of twelve headed by the Principal and including a hostel superintendent. The number of students is in the neighbourhood of one hundred and twenty and there is accommodation for fifty boarders in the hostel. A general education designed to produce useful members of society is the aim of the college.

7. The following statement shows the facilities provided for the various stages of education and the number of students taking advantage of these facilities :

Class of school	Boys' schools		Girls' Schools	
	Number of schools	Number of pupils	Number of schools	Number of pupils
High	22	10,574	3	1,203
Middle	91	12,293	15	5,187
Primary and elementary	253	25,291	106	8,720
Special	2	79	...	...
Adult schools	37	1,054	...	...
Private unrecognised schools	224	6,077	145	3,821
Total	639	55,368	269	18,931

These figures indicate an increase of 339 boys' schools and 210 girls' schools in the last twenty-five years with 33,464 and 6,727 more pupils respectively. 59.4 per cent of the boys of school-age are on the rolls. Unrecognised schools are not discussed in the paragraphs which follow.

8. Twelve of the twentytwo high schools are in Amritsar city, 3 in Amritsar tahsil, 4 in Tarn Taran tahsil and 3 in Ajnala tahsil. Government maintains one at Amritsar (whose special features are commercial classes and a manual training centre), and one at Ajnala which produces good results despite inadequate accommodation; the District Board one at Atari (which has recently moved into new buildings advantageously situated) and one at Lopeke also adequately accommodated; the municipality one at Jandiala which despite a chequered history and cramped quarters is doing good work and makes a special feature of co-operation from parents; while the other 17 are supported by various communities, 12 with assistance from Government and 5 without. The Sikhs run seven schools, five of which are in the rural area (at Sarhali, Kairon, Tarn Taran, Baba Bakala and Ramdas) and these Kha'sa high schools are generally very fine institutions. The Muslims have four schools all in Amritsar city, three of which (the M.A.O., the Anshim and the Islamia) are managed and financed by the Ajman-i-Islamia, and the Chishtia High School by a registered Governing Council of prominent local citizens including the founder. The five Hindu school are all in Amritsar city. The Hindu Sabha High Schools has already been noticed. The others are the Balmokand Khatri founded by L. Bansilal Dher Kapur, the Sanatan Dharm, the D. A. V. which is affiliated to the college of the same name in Lahore, and the Pandit Raj Nath founded by a gentleman of the same name whose son is the present headmaster. The school at Majitha is managed by the Church Missionary Society. All these institutions prepare student for the matriculation examination of the Punjab University and are under the direct supervision of the Inspector of Schools, Lahore Division.

9. Secondary education is given in Upper Middle and Lower Middle Schools. In both the first four classes are a primary course and only the later years—two in Lower Middle and four in Upper Middle include secondary education. There are sixty-six Lower Middle schools

and twentyfive Upper Middle schools. The latter can be subdivided into seven Anglo-Vernacular Middle schools in which English is a compulsory subject from the fifth class onwards, eight Vernacular Middle schools with optional English classes, and ten Vernacular Middle schools in which English is not taught at all. The Middle schools in which English is taught feed the high schools while the others are institutions with a rural bias. Students are prepared for the Vernacular Final Examination. The district board maintains eighty-six of the ninetyone middle schools in the district, and the municipality of Tarn Taran one. The other four are supported by private bodies and two of these receive grants-in-aid from Government. The distribution by tahsils is thirtyfour in Amritsar (including a private school in the Amritsar municipal area), twentyseven in Tarn Taran, and thirty in Ajnala tahsil.

10. Primary education is ordinarily given in primary
Boys' Primary Education. schools with a four years' course in reading, writing, arithmetic and geography. In backward areas there are aided institutions for the same purpose which are called elementary schools. Their curriculum is much the same. Local bodies are responsible for primary education and of the 263 primary and elementary schools in the district 147 are maintained by the district board and 30 by municipalities. 79 of the 86 schools privately managed receive grants-in-aid from local bodies—33 from the district board and 46 from municipalities and small towns. Muslim bodies maintain 29 schools, Sikhs 28, Hindu 26, Christians 2 and Jains 1. 67 of the primary schools are within Amritsar municipal limits, 80 in Amritsar tahsil, 79 in Tarn Taran tahsil and 37 in Ajnala tahsil.

11. The 3 high schools for girls are all situated within
Girls' Schools Amritsar municipal limits. The oldest of these is the Alexandra High School founded by the Church Missionary Society in 1878 and taking its name with royal sanction from Princess Alexandra later Queen Alexandra who had visited the Punjab in 1875. It is situated on an extensive site in Civil Lines with adequate accommodation.

The average number of students is three hundred and there is hostel accommodation for about 185 pupils. Each of the hostels has an English warden. Special emphasis is laid on character-training, and responsibility and leadership among the elder girls are developed by giving them considerable powers of discipline. There are communal restrictions for admission and the high quality of the school is appreciated by all communities. Both it and the Shrimrti Dayawanti Kanya Mahan Vidyallaya receive grants-in-aid from Government. The latter was founded in 1906 and has 350 students on the roll. There is no hostel accommodation. The third school is a Government High School which started in 1929 from the provincialisation of a municipal school. It is situated in Civil Lines and has over six hundred students on the rolls. There is no hostel accommodation and the school buildings are inadequate and unsuitable.

Only 4 of the 15 middle schools are situated outside Amritsar town. Government maintains a school at Jalalabad, the District Board one at Kairon and the Sikh community one at Taran Taran (all three in the Tarn Taran tahsil), and the municipality one at Jandiala (in the Amritsar tahsil). The Kairon school requires special mention as it is a remarkably fine institution. It is housed in very good buildings which include residential accommodation for pupils. The number of students exceeds two hundred. The municipality maintains five of the schools at Amritsar and aids the other six which are managed on a communal basis.

The majority of the 106 primary schools are maintained by local bodies—49 (including 9 co-educational schools) by the District Board and 28 by various municipalities and small towns. The 29 private institutions all receive grants-in-aid from local bodies. 31 schools are located in the Amritsar municipal area, 32 in Amritsar tahsil, 25 in Tarn Taran tahsil and 18 in Ajnala tahsil.

12. The district led the way in a scheme of co-education in primary schools staffed exclusively by women. Four schools were opened in 1935 and there are now 9, 3 in each tahsil, which have been included among girls' co-education

schools in the foregoing statistics. 417 boys and 295 girls are being taught in these schools. In addition to this there are 1,704 girls in boys' schools and 525 boys in girls' schools.

13. The two special schools run by the Education Department and shown in the statement given earlier in this section are a post matriculation Commercial and Clerical Class attached to the Government High school and a junior vernacular teachers' training class attached to the Khalsa Collegiate school. In the former short-hand, type writing, book-keeping and other commercial subjects are taught. In the latter pupil-teachers are given a two years' course of training designed to qualify them to teach in and take charge of primary schools under private management.

The Department of Industries has two institutions in Amritsar—a Central Weaving Institute and an Industrial School. The former gives technical instruction in handloom weaving and allied subjects, gives information about mechanical improvements and appliances, undertakes experimental and research work, and generally seeks to improve and strengthen the textile industry of the province. There are three classes of students. Class A aims at equipping students to be teachers or organisers in the textile industry or to start their own business on modern lines. The course lasts two years and ends with an examination on the result of which a diploma is awarded. Class B has been established for the benefit of the weavers' community only and is really an artisans' class in which certificates are awarded for successful appearance in the examination which concludes the ten months' course. Class C is a *Pinkhab* class for the benefit of silk weavers in artistic designs. The course is of the same length as the artisans' class and certificates are awarded. The department's other institution is the Industrial School which recruits matriculates of any class and anglo-vernacular middle-passed sons of hereditary *darzis* for a course of three years in Modern Tailoring and Cutting for men. The school attempts to reach the standard of work done in high class firms in Lahore. Admissions are limited to forty.

The most notable private institution is the Blind Institute which now occupies excellent buildings near the Fort. The school receives a small grant-in-aid from the Department of Industries on account of the fact that inmates are taught craft occupations suitable for blind persons such as cane-work, basketry and music.

14 The reduction of illiteracy among adults is now an important feature of educational activities and there are 37 adult schools in the district with 1,054 pupils. 10 of these are maintained by the District Board and 27 are unaided. There are in addition 1,438 adults under instruction at other centres in the district. On this total of 2,492, 1,125 have received literacy certificates. A District Literacy League has been started under the presidency of the Deputy Commissioner.

15. The Punjab Primary Education Act of 1919 has been applied to 156 rural areas for which the district board is responsible, one urban area in the jurisdiction of Amritsar municipal committee and one urban area in Jandiala municipal limits. Owing to paucity of funds to deal with so many compulsory areas and the complicated procedure involved in prosecution of delinquents the penal provisions of the Act have not been effectively enforced. A fresh start has been made in selected rural and urban areas. Sixteen rural areas where panchayats as well as schools exist have been chosen for strict enforcement of compulsion through the agency of the panchayats. In these areas the percentage of admission to the total number of boys of school-age is 70 per cent compared with 66 per cent over the whole 156 compulsory areas. The municipal committee of Amritsar has also decided to enforce the Act in two out of 13 divisions of the city.

16. Instruction is not now confined to cramming children's heads with learning. Hobbies with a useful bias—photography; book-binding, Basket-making, soap-making are encouraged. Gardening and farming are a regular part of the secondary course. Singing and instrumental music are encouraged. Physical welfare claims special attention

and men with good academic qualifications are appointed as Assistant District Inspectors for Physical Training. Refresher courses are given to teachers who are responsible for Physical training in rural schools. The tendency has been to abandon set drill and gymnastics for interesting games which give recreation and exercise to all students. Regular medical inspection of pupils is coming into favour.

Useful activities are not neglected. Junior Red Cross Societies exist in 202 schools with a membership of 12,965. Scouting has made great progress and is a valuable instrument of social service. There are 58 troops with 1,540 scouts and 21 packs with 384 cubs. Among the girls the sister movement is also making its way and there are twelve companies with 289 guides and fourteen flocks with 303 bluebirds of which 58 guides and 103 bluebirds are in rural schools. There are 46 Guiders. 86 rural middle schools have village libraries; 49 schools have thrift societies with a membership of 779; sixteen schools have co-operative societies with 2,086 members; and thirteen have Penny Banks with 948 members.

17. The district is part of the charge of the Lahore Inspectorate Divisional Inspector of Schools who has two deputy inspectors to help him. In the district itself there is a District Inspector of Schools with five Assistant District Inspectors of Schools and one Assistant District Inspector of Schools for Physical Training. Most of the supervision and inspection of Vernacular schools is entrusted to the district staff but a few schools are done by the Inspector who is also responsible for the high schools. Girls' schools are in the charge of the Inspectress of Schools, Lahore Circle, who supervises high and middle institutions; while the inspection of primary schools is the responsibility of the District Inspectress.

18. Expenditure on education in 1938-39 amounted to Rs. 14,81,063/- which is more than ten times the amount spent twentyfive years ago. Of this sum Government found Rs. 5,11,318/-, the District Board Rs. 90,961/- and municipal funds Rs. 2,22,769/- Rs. 2,11,075/- from Amritsar, Rs. 5,446/- from Jandiana, Rs. 5,031/- from

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[SECTION I

Tarn Taran Rs. 660/- from Majitha, Rs. 509/- from Ramdas and Rs. 48/- from Sultanwind); Rs. 3,48,090/- came from fees and Rs. 3,07,625/- from other sources such as endowments, donations and private bounty.

19. The number of presses at work varies from year to year but is at present in the neighbourhood of seventyfive. The oldest of these is the Municipal Press which started in 1895. Other prominent presses which are over thirty years old are the Sanatan Dharm, the Rafiq-i-Am, the Wazir-i-Hind and the Akhtar-i-Hind press. The most important of the newer establishments are the Aftab Barqi, the Arya, the Nazeer, the Panjabi, and the Sanai Barqi press.

There are about a hundred newspapers and periodicals in existence. The oldest is the Khalsa Samachar which started in 1899 and others which have been established over twenty years are the Ahl-i-Hadis, the Ahl-i-Sunnat-wal-Jammat, the Al-Mualij, the Nirguniara, the Sanatan Dharma Parcharak and the Satsang. Of the newer papers the most prominent are the Khalsa-te-Khalsa Advocate (Gurmukhi weekly), Khalsa Sewak (Gurmukhi daily), Preet Lari (Urdu and Gurmukhi monthly), Punjab (Gurmukhi weekly), Punjabi Punch (Gurmukhi weekly), Qaumi Daler (Urdu weekly) and Radiant Health (English monthly). Amritsar also supports a fairly strong "gutter" press which lives on blackmail.

SECTION J—MEDICAL

1. Considerable progress has been made in the last twenty-five years and it will be convenient to record the present state of affairs under Medicine, Special Institutions, Public Health and Medical Education. The State still plays the primary role in the provision of medical services in which it is assisted by local bodies, private benevolence

(usually directed to specific objects or forms of disease and confined to provision of buildings with endowment for maintenance); the recent developement of rural dispensaries subsidised on a co-operative basis by Government and the people, and a number of private practitioners.

The Chief State medical officer is the Civil Surgeon, generally a senior officer of the Indian Medical Service. The principal institution is the Queen Victoria Jubilee Hospital, commonly known as the Civil Hospital, facing the Ram Bagh and quite close to the city. The original Civil Hospital was established in 1849 but was found to be too small as the city grew, and the foundation stone of the new building on the old police parade ground was laid in 1891 by Lady Durr. It was opened in 1905 but has since been much enlarged and is now capable of accommodating three hundred patients. In the "eye seasons" the number frequently reaches five hundred in-patients a day. The hospital's connection with the Medical School makes it a modern institution with all the latest equipment and departments required for the teaching of students. The Medical Superintendent is assisted by a senior staff drawn from the lecturers at the Medical School who are specialists in their departments; a junior medical staff of twelve doctors; a nursing staff of twenty two nurses headed by a matron; and general establishment exceeding a hundred. The eye department is one of the largest and best known in the Punjab and the hospital has a considerable reputation for general surgery also. More than six thousand operations are performed annually. There are three outpatients' dispensaries maintained by the municipality in Amritsar city where an enormous amount of work is done. There is a civil hospital at Ajnala which treats an average of 160 outpatients daily and does over twelve hundred operations a year. At Tarn Taran there is a municipal hospital which does even more work but it is housed in a very dilapidated building and it is hoped to provincialise it in time.

In the rural area there are seven civil dispensaries maintained by the District Board at Fatehabad, Chabhal, Sarhali

and Atari (in the Tarn Taran tahsil), Majitha and Mehta (in the Amritsar tahsil), and Ramda (in the Ajnala tahsil). Together they handle over a thousand outpatients daily and Chabhal does as many operations as Ajnala civil hospital. There are also twelve rural dispensaries, managed by the District Board at the expense of Government at Jalalabad, Mianwind and Kasel (in the Tarn Taran tahsil), Janian, Chawinda Devi, Tarsika, Baba Bakala and Butla (in the Amritsar tahsil), and Lopoke, Vachhoa, Rajasansi and Jasraur (in the Ajnala tahsil). Together they treat about fifteen hundred out-patients daily. The dispensaries at Kasel and Rajasansi have been greatly developed by the medical officer-in-charge of them and constitute what may be called cottage hospitals. Rajasansi does about two thousand operations a year and Kasel half that number.

Good work among women is being done by mission hospitals. St. Catherine's in Amritsar city which is staffed by well-qualified and extremely efficient doctors and nurses is very popular; and in the rural area the hospitals at Tarn Taran, Jandiala and Asrapur are outstanding. Statistical information about them will be found in section C of chapter 1. The Amritsar municipal committee also maintains a female hospital, at present situated in very old buildings but about to be replaced by the Princess of Wales Zenana Hospital.

3. The project for the latter institution has suffered many vicissitudes since its conception in 1908. After
 Special Institutions. the foundation stone was laid by Lady Chelmsford in 1917 it languished until a burst of activity which began in 1933 led to construction. The hospital is expected to open in 1940. It is situated inside the city in a fine modern building. It will start with thirtyfour beds. It is intended that this hospital should deal with all female cases other than maternity.

The latter come to the Lady Emerson Seth Chatar Bhuj Maternity Home opened in 1937. The cost of this project was met by a donation of a lakh of rupees from the sons of the late Chatar Bhuj a distinguished lawyer of Amritsar. It is situated on a valuable piece of nazul land in Civil Lines given

free by Government and is managed under the control of the provincial branch of the Indian Red Cross Society by a local committee of which the Deputy Commissioner is chairman.

The latest provision for specialised treatment is the R.B.L. Gujjar Mal Kesradevi Sanatorium for tuberculosis built by an original donation of sixty thousand rupees from Rai Bahadur L. Gujjar Mal who has increased it to a lakh of rupees. This institution is a link in the chain of investigation, classification and treatment of tuberculosis. Investigation and classification are carried on at a clinic in the city for which a new building is about to be constructed at the expense of Rai Bahadur Lala Labh Chand and his brothers. Health Visitors for house-to-house investigation are based on this clinic through which cases requiring further treatment are passed to the sanatorium. The more serious cases requiring active treatment go to the Civil Hospital before being sent to the sanatorium.

A much older institution of a rather different nature is the Leper Asylum, now called the Leper Home, situated about a mile west of Tarn Taran, a town which has always been the resort of lepers who flock to it in large numbers from all parts of the country. The water of the tank attached to the Sikh temple (gurdwara) is popularly believed to be beneficial to lepers bathing in it and drinking it. The original asylum was built and opened in 1858 by Mr. Cooper, Deputy Commissioner. It consisted of double rows of huts, built in lines of 35 each, to accommodate nearly 200 inmates. For its more effective management and closer supervision the institution was made over by Government in 1903 to the Rev. E. Guilford, C.M.S., acting on behalf of the Mission to Lepers in the East. (The sphere of the Mission has since been enlarged and it is now The Mission to Lepers. It had been in charge of an Assistant Surgeon under the control of the Civil Surgeon Amritsar, the Rev. E. Guilford acting as honorary superintendent. On taking over charge he demolished the old *kacha* huts and erected an entirely new masonry building with well-lighted and ventilated rooms, surrounding a large square well-wooded and with several flower gardens to brighten the general aspect

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[SECTION J

of the place. A medical officer trained at the school of Tropical Diseases specially for the treatment of leprosy, under Dr. Muir and other necessary staff, is in charge of the institution which is annually inspected by a visiting committee consisting of the Civil Surgeon Amritsar (Chairman), Honorary Superintendent of the Leper Home (Secretary), a representative of the Deputy Commissioner Amritsar, the District Medical Officer of Health, and two non-official members. The chief work of the committee is to look into the common weal of the inmates and present its report to the Secretary of the British Empire Leprosy Relief Association, Punjab Branch. The Home is maintained from provincial funds with a *per caput* grant which is at present at the rate of Rs. 6/2/- for adults and Rs. 3/1/- for children under twelve years of age. This is to cover expenses for food, clothes, medicines, dressings, establishment and repairs of the building. The maximum number for which the maintenance grant can be claimed is 220 adults and 60 children. In addition to this a special grant for 70 patients, at the rate of Rs. 2 10/- per head per month, has been made by the Government for special treatment of leprosy by means of hydnocarpus oil with creosote.

A separate home for the untainted children of the lepers was started in 1881, but the building for them having become inadequate the successors of the late Canon E. Guilford were able in 1926 and 1932 to construct palatial buildings for boys and girls respectively. There are at present 85 children in these homes, and over 200 have gone out and are living as healthy and useful citizens in different spheres. Some of the boys were decorated for service during the war of 1914-18. Isolation from parents has proved most effective in this institution in saving the offspring of lepers from the dreadful disease. The Mission to Lepers lays great stress on it, and the work of rescue could not be carried on successfully without their generous help.

The provincial jail for lepers, which was once situated near the Asylum, has been removed and provision has been made for criminals afflicted with leprosy in one of the jails of the province.

4. Preventive medicine is not now confused with the treatment of disease but is under the separate control of the provincial Department of Public Health which maintains a District Medical Officer of Health in the district. He is an officer of the provincial service and an *ex officio* member of the District Board which provides most of the funds for his office, field staff, and activities. Central control is exercised by the Director of Public Health Punjab through the Assistant Director of Public Health, Central Range, who has his headquarters at Lahore. The local staff consists of sub-assistant health officers, lady health visitors, sanitary inspectors and gangs, and vaccinators. The small urban areas which have their own arrangements are under the supervision of the District Medical Officer of Health. Amritsar town has its own municipal medical officer of health. While direction comes from provincial sources the views of the people expressed through their representatives on the District Board are respected as far as possible. To provide bases for the increasing scope of preventive work a scheme for the gradual transfer of rural dispensaries from the control of the Civil Surgeon to that of the health department is under way.

The principal branches of work are vaccination, sanitation, maternity and child welfare, control of epidemics, supervision of fairs and propaganda. Each police station area has a vaccinator who is responsible for the primary vaccinations (which are compulsory) in his area. The cost of this branch of work to the District Board is about twelve thousand rupees a year. Sanitation is now a co-operative matter for which Government and District Board find funds where the people themselves are willing to make a contribution in money or labour. The District Board spends about two thousand rupees a year on sanitary works. For maternity and child welfare work the board maintains a health centre in each tahsil at an annual cost of some Rs. 8,000/-. Control of epidemics includes not only outbreaks of cholera and plague but also prevention of malaria. Expenditure naturally varies a great deal but ordinarily the board provides Rs. 10,000/- a year. The department also attends to public health at local fairs.

5. The Medical School was separated from the King Edward Medical College, Lahore and removed to Amritsar in 1920. It occupies an excellent site in spacious grounds on the Majitha road in Civil Lines. The annual expenditure is in the neighbourhood of Rs. 1,43,000/- of which about Rs. 84,000/- are met by grants from Government and the balance from fees and other income. The school awards the diplomas of L.M.S. (Licentiate in Medicine and Surgery) and Ophthalmology, and Dispensers' and Dressers' certificates. The course has recently been extended to five years and facilities for clinical work are increasing.

The Principal is a senior officer of the Indian Medical Service who is assisted by a vice-principal selected from the Provincial Civil Medical Service and lecturers in Medicine, Mental Diseases, Forensic Medicine, Ophthalmology, Midwifery, Surgery, Clinical Surgery, Pathology, Hygiene, Physiology, Materia Medica, Anatomy, Practical Pharmacy, Physics and Chemistry, Biology and English. There are seventeen demonstrators as well.

Medical education appears to have become increasingly popular particularly among women and the number of students is now well over five hundred of whom about a hundred are women. Forty per cent of admissions are reserved for muslims, twenty per cent for sikhs and forty per cent for other communities. The increase in female students has led to special arrangements being made for their comfort such as reserving front benches for them at lectures, giving them special attention in clinical work and providing a separate rest-room for them. They also have their own hostel under the supervision of European lady who lives on the premises. It is housed in a hired building near the school. The men's hostel is in the school grounds and its two blocks accommodate 320 students who have a reading room and separate kitchens in each. The physical health of the students receives considerable attention and cricket, tennis, badminton and volley-ball are regularly played. The school dramatic club is a flourishing institution which gives at least one public performance annually.



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